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274160

April 15, 1996

Mr. William Harmon
Michigan Department of Environmental Quality
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Lansing, MI 48909

Dear Mr. Harmon:

Thank you for providing the *Summary of the North Bronson Industrial Area Superfund Site General Information Meeting Between the Michigan Department of Environmental Quality (MDEQ), the U.S. Environmental Protection Agency (EPA), and the Site Potentially Responsible Party (PRP, February 20, 1996, Final (Summary Report)*. As a follow-up, I have prepared (at the request of the North Bronson PRP Group) and attached hereto a position paper entitled *Determining Compliance Point Concentrations for Chemical Constituents in Soil at the North Bronson Area Superfund Site*. This document addresses methodologies and assumptions regarding the derivation of 95 percent upper confidence limits (UCLs) of the arithmetic mean concentrations of soil constituents that were proposed by MDEQ in Issue #12 of the Summary Report.

Issue #12 relates to the assumed lognormality for the distributions of concentrations of soil constituents in deriving 95% UCLs. The attached report details the results of various statistical tests applied to the data obtained during the Remedial Investigation to ascertain the nature of the distributions of concentrations, and presents arguments supporting the derivations of 95% UCLs from data that are not log-transformed. The findings of this evaluation are provided for your review and consideration.

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Mr. William Harmon
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April 15, 1996
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If you or Jeff Crum have any questions, please feel free to contact me anytime.

Sincerely yours,



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Setting the Standards for Innovative
Environmental Solutions

**DETERMINING COMPLIANCE POINT CONCENTRATIONS
FOR CHEMICAL CONSTITUENTS IN SOIL
AT THE NORTH BRONSON AREA SUPERFUND SITE**

April 15, 1996

Prepared for:

**NORTH BRONSON INDUSTRIAL AREA
PRP GROUP**

Prepared by:

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1.0 Introduction

On February 29, 1996, the Michigan Department of Environmental quality (MDEQ) provided the North Bronson Industrial Area Superfund Site Potentially Responsible Party (PRP) Group with a copy of a written document entitled, *Summary of the North Bronson Industrial Area Superfund Site General Information Meeting Between the Michigan Department of Environmental Quality (MDEQ), the U.S. Environmental Protection Agency (EPA), and the Site Potentially Responsible Party (PRP); February 20, 1996, Final.* This document summarized 15 issues. Among these issues (*viz.*, Issue #12) MDEQ states that it proposes to re-evaluate exceedences of Applicable or Relevant and Appropriate Requirements (ARARs) by making comparisons to the 95% upper confidence limit (UCL) on the mean of lognormal-transformed data. Specifically, the document states:

The data was assumed to be log-normally distributed. The arithmetic mean of the log transformed data was calculated. The 95% UCL on the mean was then calculated for the log transformed data. The 95% UCL or the maximum detected concentration, whichever is lower, was then used in to [sic] identify chemicals of concern [COC]. COC are defined as chemicals that exceed applicable ARARs.

This report examines the appropriateness of “assuming” data (especially soil data) to be lognormally distributed for constituents identified during the Remedial Investigation of the North Bronson Industrial Area Superfund Site. This report will, in fact, show that it is important not to assume a lognormal distribution. It will further show that different methods should be used to calculate the 95% UCL depending on whether the data are normally or lognormally distributed because there can be substantial differences in the resulting 95% UCL values. Based on findings and conclusions presented herein, and consistent with Part 201

Amendments and EPA Guidelines, Environmental Standards, on behalf of the PRP Group, submits that 95% UCLs for soils at the site should be derived from non-transformed data, rather than from log-transformed data.

2.0 Discussion

To determine compliance with a soil cleanup criterion, the Environmental Response Division of the MDEQ Operational Memorandum #14 (rev. 2) provides as follows:

Average on-site soil concentrations, represented as the 95% upper confidence level (UCL) on the arithmetic mean, may be used to determine compliance with the soil direct contact value. On-site 95 percent UCLs should, however, reasonably represent the areas over which exposures are expected to occur. Refer to EPA Guidance (EPA, 1992b) on appropriate methodology for calculating the 95% UCL.

The referenced EPA Guidance, *Supplemental Guidance to RAGS: Calculating the Concentration Term* (1992a), states that most large or “complete” environmental data sets from soil sampling are lognormally distributed, but that such an assumption should be tested if the data suggest a distribution other than lognormal:

Because the transformation is a necessary step in calculating the UCL of the arithmetic mean for a lognormal distribution, the data should be transformed by using the natural logarithm function (*i.e.*, calculate $\ln [x]$, where x is the value from the data set). However, in cases where there is a question about the distribution of the data set, a statistical test should be used to identify the best distributional assumption for the data set.

The methods by which the 95 % UCL is calculated are quite different for data sets that are normally and those that are lognormally distributed and result in notable differences in estimated values. Accordingly, it is important not to simply assume a lognormal distribution. EPA has further elaborated on this critical determinant in its *Guidance for Data Usability in Risk Assessment (Part A)* (EPA, 1992b):

The nature of the observed chemical data distribution affects estimation procedures. The estimation of variability and confidence intervals will become complex if the distribution cannot be assumed normal or to approximate normal when transformed to log normal. Estimates of the 95 % upper confidence limit of the average concentration for the RME should be based on an analysis of the frequency distribution of the data whenever the database is sufficient to support such analysis. Statistical tests may be used to compare the distribution of the observed data with the normal or lognormal distribution (Gilbert, 1987). Graphs of data without statistical test results may also be acceptable for some data sets. Statistical computer software can assist in the analyses of data distribution.

EPA Guidance supports the use of statistical tests to determine the best distributional assumption for determining the 95 % UCL of the arithmetic mean for chemical data sets.

Consistent with EPA Guidance, soil and other data collected during the Remedial Investigation for the Western Lagoon and Eastern Lagoon areas of the North Bronson site were thoroughly examined using appropriate statistical tests to determine goodness-of-fit for log-transformed data. Natural logarithms of chemical concentrations in the following media were analyzed statistically, as described below:

Western Lagoon Subsurface
Western Lagoon Sludge
Western Lagoon Berm

Western Lagoon Surface Water

Eastern Lagoon Subsurface

Eastern Lagoon Sludge

Eastern Lagoon Berm

Application of the Kolmogorov-Smirnov one-sample goodness-of-fit test compares a hypothesized and an observed cumulative distribution. The null hypothesis (H_0) of the Kolmogorov-Smirnov one sample test for log-transformed data states: The log-transformed values of the sampled population are normally distributed, and consequently, the sampled population is lognormally distributed. If the highest absolute D value for the sampled population is greater than that generated for a standard lognormal distribution with the same number of components, then H_0 is rejected. However, if D for the sampled population is less than that for the standard lognormal distribution, then the H_0 cannot be rejected. In this case, the result does not mean that the population from which the sample was derived is definitely lognormal. Instead, it means that the lognormal distribution does not appear to be an unreasonable approximation to the true unknown distribution (Conover, 1980). Although the results of the test show that the sampled data could easily have come from a lognormal distribution, with a small number of data points in the sample, there are other distributions from which the sampled data could also come. A good fit only implies that it has not been possible to show that the sampled data set is not a lognormal distribution. The Lilliefors goodness-of-fit test is a modification of the Kolmogorov-Smirnov test that allows for a less conservative computation of a test statistic where the parameters of the hypothesized population distribution (*i.e.*, the mean, μ and the variance, and σ^2) are unknown (Daniel, 1990).

The Kolmogorov-Smirnov and Lilliefors goodness-of-fit tests were applied to log-transformed chemical data collected from various media at the North Bronson site. A summary of the results of the statistical tests are presented in Attachment 1. A preliminary evaluation of the

results of the statistical analyses of organic chemical data revealed that almost none of the chemicals reported in any of the media are lognormally distributed. In contrast, most inorganic chemicals appeared to be lognormally distributed in all media. A complete evaluation of the results of the Kolmogorov-Smirnov and Lilliefors test results for the North Bronson data regarding the distribution of chemicals at the site revealed the following:

Western Lagoon Subsurface - H_0 was not rejected for any of the chemicals in this data set (*i.e.*, all are lognormal). However, the statistic was based on 5 samples. For some of the chemicals (cadmium, cobalt, lead, selenium, and cyanide) for which H_0 was not rejected, confidence in the statistic was high (Lilliefors, $.01 > p > .05$) as a result of the smaller differences in the values of the D statistics for the hypothesized and observed population distributions. For those chemicals, such additional statistical analyses to test for normality as the Shapiro-Wilk Test or D'Agostino Test may be prudent.

Western Lagoon Sludge - With the exception of bis(2-ethylhexyl)phthalate, H_0 was rejected for all of the organic chemicals in this data set (*i.e.*, only bis(2-ethylhexyl)phthalate is lognormal). H_0 was not rejected for any of the inorganic chemicals in this data set with the exception of mercury (*i.e.*, mercury is not lognormal). It should be noted that for all chemicals (in all media) for which H_0 was rejected (*i.e.*, distribution is not lognormal), confidence was consistently high (Lilliefors, $p < .01$). Some chemicals in Western Lagoon sludge (aluminum, cobalt, lead, nickel, potassium, and selenium) for which H_0 was not rejected (*i.e.*, distribution is lognormal) had a high statistical confidence (Lilliefors $.01 < p < .05$),.

Western Lagoon Berm - H_0 was not rejected for any of the inorganic chemicals in this data set (*i.e.*, distribution is lognormal). However, the statistic was based on 4 samples. Although the H_0 was not rejected for lead, the statistical confidence for that chemical was high (Lilliefors $p < .05$).

Western Lagoon Surface Water - H_0 was rejected (Lilliefors $p < .01$) for all organic chemicals in the data set (*i.e.*, none of the organic chemicals are lognormally distributed). In contrast, with the exception of cobalt, magnesium, mercury, and silver, H_0 was not rejected for inorganic chemicals (*i.e.*, cobalt, magnesium, mercury, and silver are not lognormally distributed). The statistic was based on 14 samples. Although the H_0 was not rejected for calcium, chromium, and copper, the statistical confidence for those chemicals was high (Lilliefors, $.01 < p < .05$).

Eastern Lagoon Subsurface - H_0 was rejected (Lilliefors, $p < .01$) for all of the chemicals except for methylene chloride, acetone, benzo(a)anthracene, chrysene, benzo(b)fluoranthene,

benzo(g,h,i)perylene, aluminum, arsenic, cadmium, calcium, chromium, cobalt, iron, magnesium, manganese, nickel, potassium, sodium, vanadium, zinc, and cyanide (*i.e.*, none of the many chemicals detected with the exception of those listed, is lognormally distributed). Of those chemicals for which H_0 was not rejected, statistical confidence was high (Lilliefors, $.01 < p < .05$) for acetone, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(g,h,i)perylene, aluminum, and zinc.

Eastern Lagoon Sludge - H_0 was not rejected for any of the chemicals in this data set except for acetone (*i.e.*, acetone is not lognormally distributed). The statistic was based on 10 samples. Although the H_0 was not rejected for carbon disulfide, 1,2-dichlorobenzene, benzoic acid, 1,2,4-trichlorobenzene, pyrene, arsenic, and silver, statistical confidence was high (Lilliefors, $.01 < p < .05$) for those chemicals.

Eastern Lagoon Berm - H_0 was not rejected for any of the chemicals in this data set. However, the statistic was based on 3 samples. Although the statistical confidence for silver was high (Lilliefors, $p < .01$) the limited data precludes further investigation.

Eastern Lagoon Groundwater - H_0 was rejected for vinyl chloride, bis(2-ethylhexyl)phthalate, cadmium, chromium, copper, selenium, and cyanide (*i.e.*, these chemicals are not lognormally distributed). Although the H_0 was not rejected for calcium, iron, lead, and manganese, the statistical confidence for those chemicals was high (Lilliefors, $.01 < p < .05$).

The above-described statistical test results, using data generated during the Remedial Investigation of the Western and Eastern Lagoons, reveal that for the majority of organic constituents at the site, the data are not lognormally distributed. Thus, to automatically assume lognormality in calculating 95% UCLs, as proposed by MDEQ and EPA for this site, is inappropriate and contrary to EPA Guidance.

Even if data for constituents in surface soil were perfectly distributed in a lognormal fashion, calculation of a 95% UCL based on log-transformed data will not accurately reflect average, long-term exposure concentrations. Exposure to chemicals in soil at a site does not necessarily follow the distribution pattern of the site-related chemical concentrations. Rather, repetitive exposure over time follows the tenets of the Central Limit Theorem in statistics,

which states that regardless of how the values in a population (in this case, chemical concentrations in surface soil) are distributed, the distribution of means from independently chosen samples will approximate a Gaussian (*i.e.*, normal) distribution, as long as the sample sizes are large enough.

In general, soil cleanup standards are based on the premise that the concentration of a chemical in soil from any location on a site must not exceed the benchmark concentration at which adverse effects may occur. For example, no soil concentration can exceed that which would result in a hazard quotient of 1 or an excess cancer risk of 10^{-5} . The underlying assumption is that if the upper bound of the average concentration of a chemical of concern at any location on the site exceeds the standard, then it is anticipated that a person on the site would be exposed to that concentration during each exposure event for the entire duration of exposure. If the upper bound is based on a 95 percent upper confidence limit of the mean concentration that assumes a lognormal distribution, the resulting exposure-point concentration likely will overestimate long-term average exposure.

The assumption referenced above is an exaggeration of exposure that amounts to the worst-case scenario to which U.S. EPA has not subscribed for several years. In most cases, chemicals are present in the soil as a result of past activities at particular locations on the site, and consequently, exposure to the chemical will vary with the location at the site. The diagrams presented in Figure 1 illustrate this concept.

Figure 1, attached hereto, depicts a hypothetical parcel of land encompassing an area of 100 m². The first frame (shaded) depicts a parcel that contains a homogeneous chemical mixture. In this scenario, a person would be exposed uniformly to approximately 10 mg of chemical per kg of soil, regardless of the location on the site where exposure occurred. In the second scenario depicted in the second frame, a person would potentially be exposed to concentrations from “hot spots” (dark areas) as well as to concentrations that may approach

non-detectable levels. Unless site-specific conditions dictate that a person will be exposed in only one area of the site (*e.g.*, work activity or an attractive nuisance that precludes exposure at any other area of the site), it is reasonable and appropriate to assume that exposure at the site is random, and as a result, there is a uniform probability that a receptor will contact any of the measured concentrations during any event. Consequently, the integrated exposure at the site will vary with the event. To illustrate this point, frames 2 through 6 of Figure 1 depict a series of 10 hypothetical, randomized exposure events.

Because each exposure event at a site comprises several exposure episodes (points of exposure), the distribution of integrated exposures should approximate a Gaussian (*i.e.*, normal) distribution as the number of exposure events increases. The degree of fit is dependent on the number of samples collected from the population.

A test of the Central Limit Theorem was applied to actual site-specific data for concentrations of cyanide in sludge from the Eastern Lagoon Area at the North Bronson site. Ten sludge samples were collected from the Eastern Lagoon and analyzed for cyanide during the Remedial Investigation of the site. The concentration of cyanide on the site was highly skewed, and ranged from 5.1 mg/kg to 317.0 mg/kg, with a mean of 69.4 mg/kg and a standard deviation (sd) of 96.4 mg/kg. The individual concentrations of cyanide from the 10 sludge samples were: 126, 106, 49, 317, 16, 8.6, 5.1, 18, 22, and 26 mg/kg. A discrete uniform distribution for cyanide was defined using @Risk®, a commercially available stochastic modeling software, and 5,000 iterations (simulations) were run in order to simulate 5,000 exposure episodes. For the purpose of this study, it was assumed that during each exposure event (one day of exposure), a person contacted 20 discrete locations of sludge, and that those 20 locations comprise the integrated (average) exposure for that event. The simulation resulted in average exposures for up to 250 events. The individual simulations and resulting averages are presented in Attachment 1 (Data), attached hereto.

The distribution of 100 average exposure events was tested using the Kolmogorov-Smirnov goodness-of-fit test (see Figure 2, attached hereto). Based on the results of the test, the null hypothesis (H_0) is accepted ($p > .15$), meaning that the distribution of average exposure concentrations to cyanide is normal. When the distribution of 250 average exposure events was tested using the same goodness-of-fit test, H_0 was accepted ($p > .025$) (*i.e.*, the distribution was normal). Because of the randomized nature of exposure to soil constituents and relative consistency of contaminants in soil over time, concentration distributions (and 95 % UCLs) used in exposure assessments should be based on a normal distribution, with a mean (μ) and a standard deviation equal to the standard error of the mean for the population from which the samples were collected (*i.e.*, $F(x) = N(\mu, s.e.m.)$). If exposure at a site is the result of randomness, as stated above, then the sum of the exposure integrations from all exposure events over a lifetime will be normally distributed, regardless of the seemingly lognormal distribution of the chemical constituents in the soil, as demonstrated in Figure 2.

In essence, the Central Limit Theorem says that when the sample size is large, probabilities involving the sample mean can be computed exactly as in the case where the data are normally distributed. The Central Limit Theorem is clearly applicable when the sample size is greater than 30 (DeVore and Peck, 1986). In the case of smaller sampling sizes, if the distribution is believed to be reasonably close to a normal distribution, a sample size of 15 or 20 may be large enough for the sample means to approximate a normal distribution. Sample sizes at North Bronson appear to be sufficiently large to demonstrate that this assumption is valid for use in determining compliance with risk-based cleanup criteria.

In terms of developing site-specific cleanup criteria and demonstrating compliance, Michigan's Part 201 Amendments to the Natural Resources and Environmental Protection Act stipulate the following:

(14) Approval by the department of a remedial action plan based on 1 or more categorical standard [*sic*] in subsection (1)(a) to (e) shall be granted only if the pertinent criteria are satisfied in the affected media. The department shall approve the use of probabilistic or statistical methods or other scientific methods of evaluating environmental data when determining compliance with a pertinent cleanup criterion if the methods are determined by the department to be reliable, scientifically valid, and best represent site conditions and exposure potential. (Section 324.20120a)

In view of the nonconformity of all data sets for all constituents in soil at the North Bronson site to exhibit a lognormal distribution, Environmental Standards proposes to utilize untransformed data in calculating 95% UCLs of average concentrations. This is most consistent with the Part 201 Amendments, EPA Guidance, and the Central Limit Theorem, given the data patterns observed for the Eastern and Western Lagoon Areas.

Tables 1 through 8, attached hereto, present the sample sizes, arithmetic means, 95% UCLs of mean concentrations derived on the basis of assumed normal distributions, and maximum detected concentrations for individual constituents detected in the Western and Eastern Lagoon Areas by medium (*e.g.*, sludge, subsurface soil, surface water and berms). No data were rejected; that is, all data from the Remedial Investigation were evaluated.

3.0 Conclusions

An assumption of lognormality in concentration distributions for calculation of 95% UCLs as a basis of compliance determination is not warranted for the North Bronson Industrial Area Superfund site. Such an assumption may not reflect actual conditions and results in an exaggeration of potential exposure levels. When data obtained during the Remedial

Investigation were statistically tested, the distributions for the majority of organic chemicals did not approach lognormality.

Statistical analysis of cyanide data (as an example) from the Eastern Lagoon Area sludge samples (these data are lognormally distributed) revealed that the distribution of average exposure levels over 250 exposure events is normally distributed. Accordingly, 95% UCLs for mean concentrations of constituents in soil are more appropriately based on an assumption of normality, regardless of the distribution pattern, as predicted by the Central Limit Theorem. As such, 95% UCLs for soils at the North Bronson Industrial Area Superfund site should be derived from non-transformed data rather than from log-transformed data.

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FIGURES

Figure 1

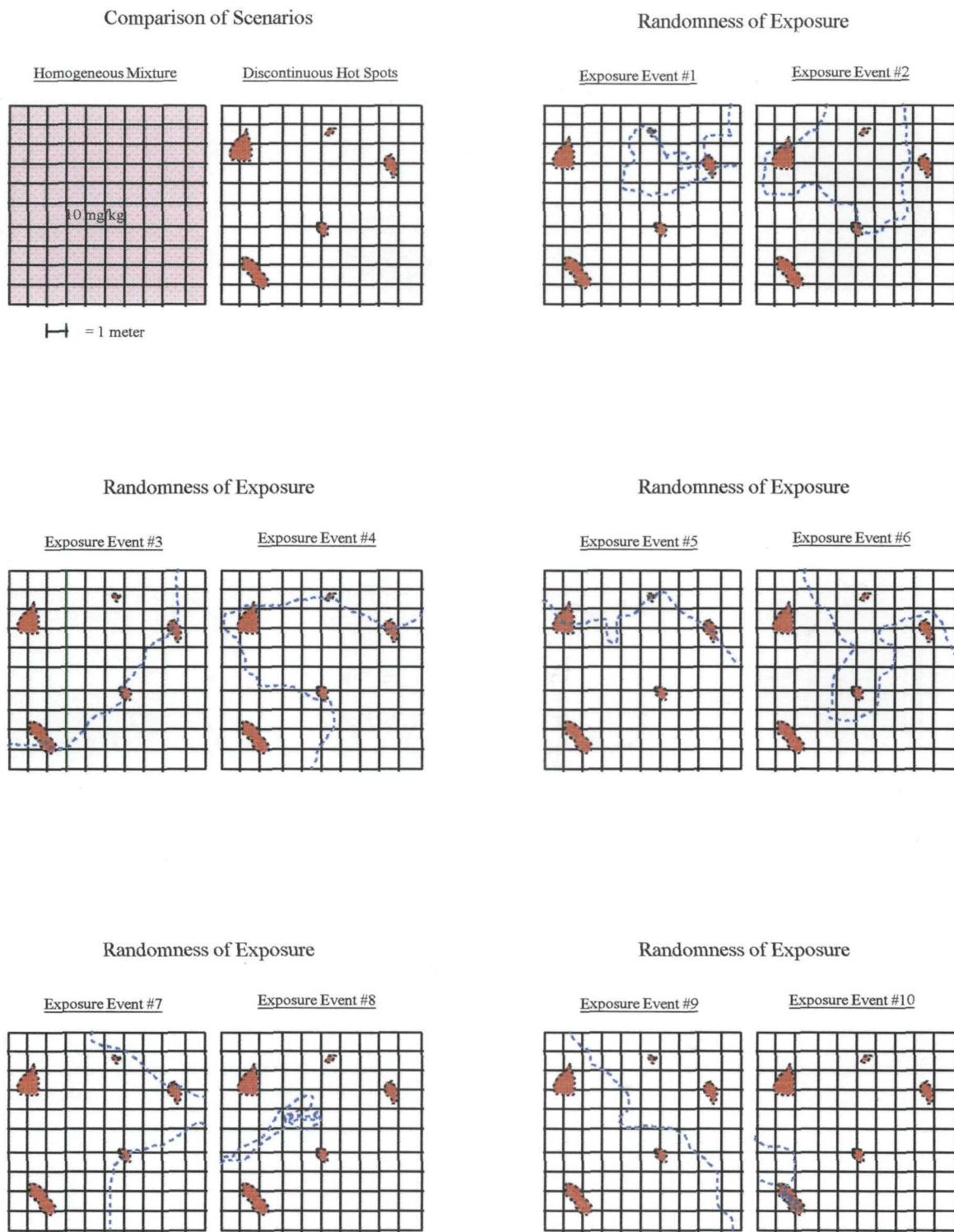
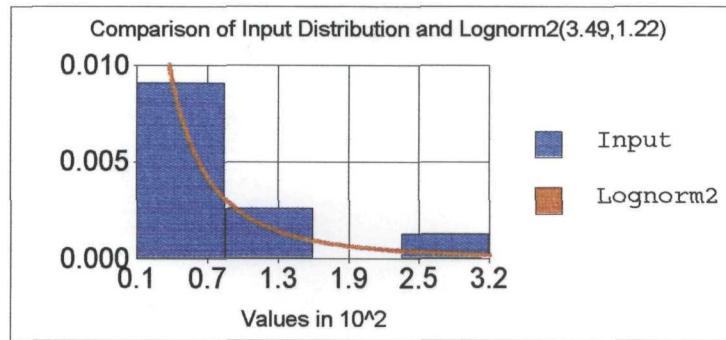
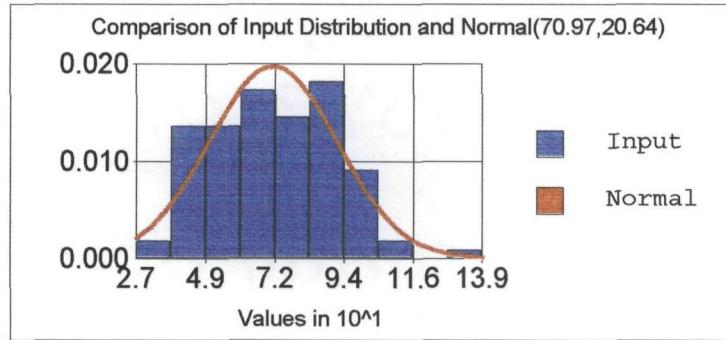


Figure 2

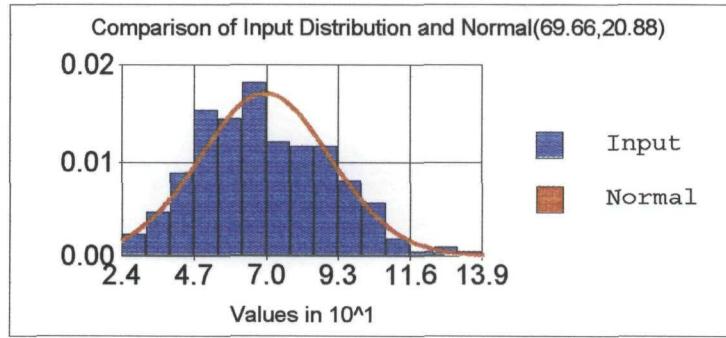
Distribution of Cyanide in Eastern Lagoon Sludge (Untransformed Data) -



Distribution of Cyanide Integrated Exposure After 100 Exposure Events -



Distribution of Cyanide Integrated Exposure After 250 Exposure Events -



TABLES

Table 1 Western Lagoon Sludge

Individual Sludge Constituents	Valid N	Mean (mg/kg)	Upper Confid.	Maximum (mg/kg)
			Limit (mg/kg)	
Vinyl chloride	53	0.01380189	16.3E-3	43.0E-3
Methylene chloride	53	0.04390566	65.5E-3	400.0E-3
Acetone	53	0.01607547	18.9E-3	48.5E-3
Carbon disulfide	53	0.00758962	9.8E-3	58.0E-3
1,2-Dichloroethene (total)	53	0.03121226	46.7E-3	260.0E-3
2-Butanone	53	0.01375472	16.1E-3	40.5E-3
Trichloroethene	53	0.22524057	454.7E-3	5.9E+0
Benzene	53	0.00662736	7.8E-3	20.0E-3
Tetrachloroethene	53	0.00683491	8.1E-3	20.0E-3
Toluene	53	0.2733066	594.5E-3	8.3E+0
Chlorobenzene	53	0.00704245	8.3E-3	22.0E-3
Diethylphthalate	18	1.38555556	3.5E+0	18.5E+0
Fluoranthene	18	1.37533333	3.5E+0	18.5E+0
Pyrene	18	1.38	3.5E+0	18.5E+0
bis(2-ethylhexyl)phthalate	18	1.37722222	3.5E+0	18.5E+0
4,4'- DDT	18	0.01975	26.0E-3	48.5E-3
Aluminum	35	3361.14286	4.3E+3	14.2E+3
Antimony	35	70.7	102.0E+0	386.0E+0
Arsenic	35	14.8131429	18.2E+0	46.4E+0
Barium	35	55.1571429	82.4E+0	358.0E+0
Beryllium	35	0.308	393.0E-3	1.0E+0
Cadmium	35	1005.05714	1.6E+3	9.3E+3
Calcium	35	81020	92.9E+3	243.0E+3
Chromium (total)	35	4404.4	6.1E+3	19.6E+3
Cobalt	35	13.54	22.4E+0	117.0E+0
Copper	35	1588.22857	2.4E+3	11.1E+3
Iron	35	11868.2857	15.1E+3	40.8E+3
Lead	35	231.754286	421.9E+0	2.6E+3
Magnesium	35	13941.1429	15.8E+3	32.5E+3
Manganese	35	245.428571	279.4E+0	554.0E+0
Mercury	35	0.09114286	131.0E-3	630.0E-3
Nickel	35	44705.4571	128.1E+3	1.4E+6
Potassium	35	287.228571	364.1E+0	995.0E+0
Selenium	35	0.85985714	1.2E+0	3.6E+0
Silver	35	17.5171429	27.3E+0	135.0E+0
Vanadium	35	14.6671429	18.6E+0	58.0E+0
Zinc	35	2599.68571	3.7E+3	12.0E+3
Cyanide	35	95.6028571	152.3E+0	831.0E+0

Table 2 Western Lagoon Subsurface

Individual Subsurface Constituents	Valid N	Mean (mg/kg)	Upper Confid. Limit	Maximum (mg/kg)
			95.00% (mg/kg)	
Aluminum	5	2934	5117.40	5530
Arsenic	5	6.78	10.37	11.4
Barium	5	24.16	64.61	81.7
Cadmium	5	58.882	170.38	204
Calcium	5	68180	106596.55	115000
Chromium (total)	5	171.8	437.94	461
Cobalt	5	3.5	5.92	6
Copper	5	69.64	205.06	261
Iron	5	6654	9526.17	9430
Lead	5	6.28	13.33	16.4
Magnesium	5	14882	23322.82	24800
Manganese	5	185.44	257.81	259
Nickel	5	117.14	312.70	356
Potassium	5	360.2	578.47	660
Selenium	5	0.297	0.54	0.64
Sodium	5	91.44	110.11	114
Vanadium	5	12.38	21.21	24.3
Zinc	5	106.66	292.82	362
Cyanide	5	18.74	63.83	83.4

Table 3 Western Lagoon Surface Water

Individual Surface Water Constituents	Valid N	Mean	Upper Confid. Limit	Maximum
		($\mu\text{g/L}$)	($\mu\text{g/L}$)	($\mu\text{g/L}$)
Methylene Chloride	14	0.00375	0.004761213	0.008
Acetone	14	0.006285714	0.007614536	0.011
Total 1,2-Dichloroethene	14	0.00325	0.003877913	0.005
2-Butanone	14	0.004857143	0.005165767	0.005
Trichloroethene	14	0.003035714	0.003572404	0.005
Benzene	14	0.003107143	0.003859775	0.005
Toluene	14	0.003142857	0.00373589	0.005
4-Methylphenol	14	0.005785714	0.007483147	0.016
bis(2-Ethylhexyl)phthalate	14	0.008142857	0.015782113	0.054
gamma-BHC	14	2.29286E-05	2.59709E-05	0.000025
Aluminum	14	0.342239286	0.620314742	1.6
Arsenic	14	0.004892857	0.007997162	0.0181
Barium	14	0.026796429	0.039917306	0.0781
Cadmium	14	0.121317857	0.226131273	0.544
Calcium	14	78.45714286	100.9530108	201
Chromium (total)	14	0.429085714	0.819391763	2.08
Cobalt	14	0.004678571	0.007485788	0.0195
Copper	14	0.172103571	0.32099521	0.766
Iron	14	1.360978571	2.275381987	5.7
Lead	14	0.01435	0.026785938	0.0722
Magnesium	14	22.01428571	25.4223764	35.9
Manganese	14	0.158064286	0.211776915	0.415
Mercury	14	0.000180714	0.000286755	0.00068
Nickel	14	0.750442857	1.411219268	3.42
Potassium	14	2.978928571	4.322541352	9.05
Silver	14	0.003171429	0.004174667	0.0067
Sodium	14	15.84857143	20.93236515	31.4
Vanadium	14	0.003921429	0.005192665	0.0083
Zinc	14	0.47035	0.896606731	2.22
Cyanide	14	0.0237	0.034987047	0.0659

Table 4 Western Lagoon Berm

Individual Berm Constituents	Valid N	Mean (mg/kg)	Upper Confid. Limit	Maximum (mg/kg)
			95.00% (mg/kg)	
Benzene	2	0.004	0.029412409	0.006
Toluene	2	0.0225	0.206739969	0.037
Aluminum	4	2195	3314.487028	2960
Antimony	4	26	63.38527918	60
Arsenic	4	21.5	29.56149937	28
Barium	4	31.5	59.8606978	54
Cadmium	4	446	1511.520062	1450
Calcium	4	64550	88682.26881	79600
Chromium (total)	4	957.25	2993.383762	2870
Cobalt	4	6.25	16.7613107	16
Copper	4	496.75	1441.559991	1380
Iron	4	8560	11516.22255	11100
Lead	4	40	110.0499735	106
Magnesium	4	14275	18766.97721	17800
Manganese	4	214.25	261.3526243	240
Nickel	4	782.5	2438.121875	2340
Potassium	4	277.25	371.3286159	364
Silver	4	7.6125	19.13878113	18
Vanadium	4	10.775	13.71014902	12
Zinc	4	336.25	940.0674712	903
Cyanide	4	31.5	63.12493467	58

Table 5 Eastern Lagoon Sludge

Individual Sludge Constituents	Valid N	Mean (mg/kg)	95.00% Confid. Limit (mg/kg)	Upper Limit (mg/kg)
Acetone	10	0.0357	0.087122337	0.24
Carbon disulfide	10	0.01285	0.027032451	0.069
2-Butanone	10	0.014	0.017528772	0.023
Benzene	10	0.00625	0.007869458	0.0095
Toluene	10	0.08755	0.176724697	0.33
1,2-Dichlorobenzene	10	0.5035	0.76373554	1.1
Benzoic acid	10	2.7889	4.332430114	6
1,2,4-Trichlorobenzene	10	0.7138	0.956498248	1.2
Acenaphthylene	10	0.709	0.948527681	1.2
Phenanthrene	10	0.717	0.945586103	1.2
Anthracene	10	0.708	0.948956022	1.2
Di-n-butylphthalate	10	0.6481	0.931493203	1.2
Fluoranthene	10	0.848	1.096117612	1.5
Pyrene	10	0.7215	1.027467337	1.2
Benzo(a)anthracene	10	0.808	1.008230373	1.2
Chrysene	10	0.808	1.008230373	1.2
bis(2-ethylhexyl)phthalate	10	10.278	16.83628762	25
Di-n-octyl Phthalate	10	0.642	0.910500892	1.2
Benzo(b)fluoranthene	10	0.808	1.008230373	1.2
Benzo(k)fluoranthene	10	0.766	0.95354391	1.2
Heptachlor epoxide	10	0.0179	0.02216823	0.0295
PCB 1254	10	0.3744	0.627106165	1.2
Aluminum	10	1564.7	1946.154235	2320
Antimony	10	865.7	1441.705318	2280
Arsenic	10	9.75	12.19067318	16
Barium	10	2230.6	3474.113881	5920
Cadmium	10	607.4	1256.55767	3060
Calcium	10	95300	117584.9209	147000
Chromium (total)	10	41261	65183.52905	97800
Cobalt	10	48.7	69.82437086	107
Copper	10	1273.5	1710.239859	2330
Iron	10	29550	38890.28655	58300
Lead	10	1110.3	1790.88306	2540
Magnesium	10	19481	28713.99904	39000
Manganese	10	342.2	434.4886193	531
Mercury	10	0.186	0.338989035	0.76
Nickel	10	32386	47895.06831	71800
Potassium	10	337.9	398.6893913	550
Silver	10	4.68	8.941270067	19
Sodium	10	1897.3	3543.669638	7320
Vanadium	10	99.1	226.3720929	601
Zinc	10	1005.4	1490.353268	2670
Cyanide	10	69.37	138.3647637	317

Table 6 Eastern Lagoon Subsurface

Individual Subsurface Constituents	Valid N	Mean (mg/kg)	95.00% (mg/kg)	Upper Confid. Limit (mg/kg)	Maximum (mg/kg)
Methylene Chloride	36	0.014784722	0.020170712	0.09	
Acetone	36	0.019168056	0.023652131	0.049	
Carbon Disulfide	36	0.004777778	0.005535644	0.014	
Chloroform	36	0.006347222	0.010531922	0.078	
2-Butanone	36	0.008131944	0.009760843	0.025	
Trichloroethene	36	0.011680556	0.017841617	0.083	
Benzene	36	0.004083333	0.004649864	0.0065	
Tetrachloroethene	36	0.004208333	0.004751091	0.0065	
1,1,2,2-Tetrachloroethane	36	0.004270833	0.004780521	0.0065	
Toluene	36	0.007902778	0.01123658	0.046	
Chlorobenzene	36	0.004402778	0.004988218	0.009	
Ethylbenzene	36	0.004388889	0.004898604	0.0065	
Total Xylenes	36	0.004916667	0.006134765	0.024	
1,4-Dichlorobenzene	35	0.299714286	0.348397153	0.86	
1,2-Dichlorobenzene	35	0.297942857	0.355309164	0.84	
1,2,4-Trichlorobenzene	35	0.305657143	0.386825996	1.5	
Naphthalene	35	0.280971429	0.322247581	0.55	
2-Methylnaphthalene	35	0.288742857	0.327664727	0.55	
Acenaphthylene	35	0.294285714	0.331406926	0.55	
Acenaphthene	35	0.289114286	0.330764615	0.55	
4-Nitrophenol	35	0.8855	1.145269571	2.6	
Dibenzofuran	35	0.291628571	0.333481834	0.55	
Fluorene	35	0.290314286	0.33118844	0.55	
Phenanthrene	35	0.379628571	0.587586911	3.8	
Anthracene	35	0.2892	0.330790626	0.55	
Fluoranthene	35	0.370857143	0.537888134	3.1	
Pyrene	35	0.364628571	0.538507217	3.2	
Benzo(a)anthracene	35	0.334857143	0.425120399	1.7	
Chrysene	35	0.343714286	0.455812586	2.1	
bis(2-Ethylhexyl)phthalate	35	0.456857143	0.801957727	6.2	
Di-n-Octylphthalate	35	0.288671429	0.330573765	0.55	
Benzo(b)fluoranthene	35	0.372285714	0.534044592	3	
Benzo(k)fluoranthene	35	0.300857143	0.341975815	0.56	
Benzo(a)pyrene	35	0.311142857	0.363974704	0.91	
Indeno(1,2,3-cd)pyrene	35	0.332571429	0.423199112	1.7	
Dibenz(a,h)anthracene	35	0.287571429	0.329778537	0.55	
Benzo(g,h,i)perylene	35	0.337142857	0.43276533	1.8	
beta-BHC	37	0.008567838	0.015857541	0.135	
gamma-BHC	37	0.008465946	0.015766967	0.135	
Heptachlor	37	0.008473784	0.015773878	0.135	
Aldrin	37	0.008505405	0.015801558	0.135	
Heptachlor epoxide	37	0.008478108	0.015777765	0.135	
Endosulfan I	37	0.008485946	0.015784504	0.135	
Dieldrin	37	0.015848378	0.030140201	0.265	
4,4'-DDE	37	0.014106216	0.028441099	0.265	
Endrin	37	0.016284595	0.030553217	0.265	
4,4'-DDD	37	0.019331892	0.034198609	0.265	
4,4'-DDT	37	0.015884595	0.030170652	0.265	
Methoxychlor	37	0.080972432	0.153817381	1.35	
Endrin ketone	37	0.01521973	0.029534402	0.265	
alpha-Chlorodane	37	0.077928378	0.151127226	1.35	

Table 6 Eastern Lagoon Subsurface

Individual Subsurface Constituents	Valid N	Mean	95.00%	Upper Confid. Limit
		(mg/kg)	(mg/kg)	(mg/kg)
gamma-Chlorodane	37	0.077918378	0.15111843	1.35
Aroclor-1248	37	0.087048649	0.159204019	1.35
Aroclor-1254	37	0.17412973	0.316372388	2.65
Aroclor-1260	37	0.09167027	0.130801032	0.55
Endrin aldehyde	19	0.001776842	0.001942447	0.0021
Aluminum	35	3322.828571	4139.332475	9160
Antimony	35	4.576571429	5.856597339	19.8
Arsenic	35	7.078571429	8.891497476	18.3
Barium	35	43.60285714	78.06915014	594
Beryllium	35	0.163357143	0.229903696	1.25
Cadmium	35	449.9857143	778.1032406	4900
Calcium	35	50671.42857	58358.8939	103000
Chromium (total)	35	1015.954286	1886.562312	14500
Cobalt	35	3.82	5.02872796	19.9
Copper	35	219.5885714	360.1158584	2110
Iron	35	9206.571429	10992.72919	21100
Lead	35	175.1585714	482.1912885	5308
Magnesium	35	11203.28571	12954.56267	23900
Manganese	35	202.32	228.6009222	472
Mercury	35	0.077285714	0.115290332	0.7
Nickel	35	1097.442857	2088.86919	14400
Potassium	35	318.3714286	369.5042008	680
Silver	35	0.8155	1.33531536	8.8
Sodium	35	88.36285714	100.6393439	204
Thallium	35	0.213642857	0.264829802	0.5
Vanadium	35	10.15857143	12.17756523	22.9
Zinc	35	262.9685714	432.2549437	2480
Cyanide	35	34.97157143	69.56409945	584

Table 7 Eastern Lagoon Berm

Individual Berm Constituents	Valid N	Mean	Upper Confid. Limit	Maximum
		(mg/kg)	(mg/kg)	
Acetone	3	0.014	0.050572548	0.031
Benzene	3	0.002	0.004484138	0.003
Toluene	3	0.006333333	0.027166547	0.016
Naphthalene	3	0.264333333	0.686756063	0.365
2-Methylnaphthalene	3	0.315	0.519470339	0.365
Phenanthrene	3	0.285	0.618513413	0.365
Di-n-butylphthalate	3	0.261	0.730646585	0.38
Aroclor-1254	3	0.215	0.786400274	0.48
Aluminum	3	2720	5227.872051	3800
Antimony	3	24	62.72387457	42
Arsenic	3	10.73333333	19.9959808	15
Barium	3	33.66666667	105.4205591	67
Cadmium	3	783.6666667	3185.405639	1900
Calcium	3	29966.66667	53150.9169	38500
Chromium (total)	3	860	3178.081195	1930
Cobalt	3	2.85	8.981594653	5.7
Copper	3	631	2188.383972	1332
Iron	3	9966.666667	17028.32059	13200
Lead	3	17.23333333	46.56965699	30
Magnesium	3	8980	17464.41225	11100
Manganese	3	181	458.6572627	310
Nickel	3	774	2790.567546	1700
Potassium	3	271.6666667	416.8205392	314
Silver	3	2.633333333	9.230734185	5.7
Vanadium	3	12.73333333	24.28212491	18
Zinc	3	459.3333333	1669.254616	1010
Cyanide	3	24.33333333	66.36838857	43

Table 8 Eastern Lagoon Groundwater

Individual Groundwater Constituents	Valid N	Mean	Upper Confid. Limit	Maximum
		(mg/kg)	(mg/kg)	
Vinyl Chloride	23	0.005434783	0.006178951	0.01
Total 1,2-Dichloroethene	23	0.016391304	0.02874679	0.12
Trichloroethene	23	0.082152174	0.136241142	0.4
bis(2-Ethylhexyl)phthalate	20	0.00545	0.007171102	0.018
Aluminum	23	0.048941304	0.073147926	0.28
Arsenic	23	0.002297826	0.002917986	0.0066
Barium	23	0.063334783	0.083924634	0.203
Cadmium	23	0.030995652	0.061804187	0.301
Calcium	23	96.55217391	111.2814394	217
Chromium (total)	23	0.00475	0.007394532	0.028
Copper	23	0.005367391	0.00777687	0.0189
Iron	23	0.269084783	0.415006387	1.26
Lead	23	0.000858696	0.00103064	0.0021
Magnesium	23	21.86086957	25.56913927	46.1
Manganese	23	0.164004348	0.238618231	0.834
Nickel	23	0.105582609	0.213250046	1.1
Potassium	23	1.824652174	2.387571916	5.74
Selenium	23	0.000786957	0.000998123	0.0024
Sodium	23	101.1334783	172.6712109	610
Zinc	23	0.038491304	0.055461339	0.132
Cyanide	23	0.036791304	0.084315943	0.531

ATTACHMENT 1

ALUMINUM (log-tr~1.sta)

K-S d=.29978, p> .20; Lilliefors p<.15

ARSENIC (log-tr~1.sta)

K-S d=.17682, p> .20; Lilliefors p> .20

BARIUM (log-tr~1.sta)

K-S d=.26063, p> .20; Lilliefors p> .20

CADMIUM (log-tr~1.sta)

K-S d=.33875, p> .20; Lilliefors p<.05

CALCIUM (log-tr~1.sta)

K-S d=.29688, p> .20; Lilliefors p<.20

CHROMIUM (log-tr~1.sta)

K-S d=.22726, p> .20; Lilliefors p> .20

COBALT (log-tr~1.sta)

K-S d=.37433, p> .20; Lilliefors p<.05

COPPER (log-tr~1.sta)

K-S d=.15951, p> .20; Lilliefors p> .20

IRON (log-tr~1.sta)

K-S d=.23518, p> .20; Lilliefors p> .20

LEAD (log-tr~1.sta)

K-S d=.38702, p> .20; Lilliefors p<.05

MAGNESIUM (log-tr~1.sta)

K-S d=.13442, p> .20; Lilliefors p> .20

MANGANESE (log-tr~1.sta)

K-S d=.33199, p> .20; Lilliefors p<.10

NICKEL (log-tr~1.sta)

K-S d=.28736, p> .20; Lilliefors p<.20

SELENIUM (log-tr~1.sta)

K-S d=.40595, p> .20; Lilliefors p<.01

SODIUM (log-tr~1.sta)

K-S d=.18622, p> .20; Lilliefors p> .20

VANADIUM (log-tr~1.sta)

K-S d=.18198, p> .20; Lilliefors p> .20

ZINC (log-tr~1.sta)

K-S d=.27719, p> .20; Lilliefors p> .20

CYANIDE (log-tr~1.sta)

K-S d=.34436, p> .20; Lilliefors p<.05

VINYL_CH (log-tr~2.sta)	BARIUM (log-tr~2.sta)
K-S d=.18031, p<.10 ; Lilliefors p<.01	K-S d=.14664, p> .20; Lilliefors p<.10
METHYLEN (log-tr~2.sta)	BERYLLIU (log-tr~2.sta)
K-S d=.16184, p<.15 ; Lilliefors p<.01	K-S d=.12719, p> .20; Lilliefors p<.20
ACETONE (log-tr~2.sta)	CADMIUM (log-tr~2.sta)
K-S d=.22130, p<.05 ; Lilliefors p<.01	K-S d=.10059, p> .20; Lilliefors p> .20
CARBON_D (log-tr~2.sta)	CALCIUM (log-tr~2.sta)
K-S d=.23236, p<.01 ; Lilliefors p<.01	K-S d=.10216, p> .20; Lilliefors p> .20
VAR5 (log-tr~2.sta)	CHROMIUM (log-tr~2.sta)
K-S d=.21690, p<.05 ; Lilliefors p<.01	K-S d=.14041, p> .20; Lilliefors p<.10
VAR6 (log-tr~2.sta)	COBALT (log-tr~2.sta)
K-S d=.18741, p<.05 ; Lilliefors p<.01	K-S d=.17511, p> .20; Lilliefors p<.01
TRICHLOR (log-tr~2.sta)	COPPER (log-tr~2.sta)
K-S d=.17873, p<.10 ; Lilliefors p<.01	K-S d=.11415, p> .20; Lilliefors p> .20
BENZENE (log-tr~2.sta)	IRON (log-tr~2.sta)
K-S d=.25454, p<.01 ; Lilliefors p<.01	K-S d=.09804, p> .20; Lilliefors p> .20
TETRACHO (log-tr~2.sta)	LEAD (log-tr~2.sta)
K-S d=.24798, p<.01 ; Lilliefors p<.01	K-S d=.16177, p> .20; Lilliefors p<.05
TOLUENE (log-tr~2.sta)	MAGNESIU (log-tr~2.sta)
K-S d=.18470, p<.10 ; Lilliefors p<.01	K-S d=.12503, p> .20; Lilliefors p<.20
CHLOROBE (log-tr~2.sta)	MANGANES (log-tr~2.sta)
K-S d=.24242, p<.01 ; Lilliefors p<.01	K-S d=.13870, p> .20; Lilliefors p<.10
DIETHYLP (log-tr~2.sta)	MERCURY (log-tr~2.sta)
K-S d=.26383, p<.15 ; Lilliefors p<.01	K-S d=.26392, p<.05 ; Lilliefors p<.01
FLUORANT (log-tr~2.sta)	NICKEL (log-tr~2.sta)
K-S d=.24489, p<.20 ; Lilliefors p<.01	K-S d=.16583, p> .20; Lilliefors p<.05
PYRENE (log-tr~2.sta)	POTASSIU (log-tr~2.sta)
K-S d=.24909, p<.20 ; Lilliefors p<.01	K-S d=.15964, p> .20; Lilliefors p<.05
BIS_2_ET (log-tr~2.sta)	SELENIUM (log-tr~2.sta)
K-S d=.21346, p> .20; Lilliefors p<.05	K-S d=.16379, p> .20; Lilliefors p<.05
VAR16 (log-tr~2.sta)	SILVER (log-tr~2.sta)
K-S d=.25523, p<.20 ; Lilliefors p<.01	K-S d=.14838, p> .20; Lilliefors p<.10
ALUMINUM (log-tr~2.sta)	VANADIUM (log-tr~2.sta)
K-S d=.16499, p> .20; Lilliefors p<.05	K-S d=.14835, p> .20; Lilliefors p<.10
ANTIMONY (log-tr~2.sta)	ZINC (log-tr~2.sta)
K-S d=.11337, p> .20; Lilliefors p> .20	K-S d=.13309, p> .20; Lilliefors p<.15
ARSENIC (log-tr~2.sta)	CYANIDE (log-tr~2.sta)
K-S d=.09545, p> .20; Lilliefors p> .20	K-S d=.06992, p> .20; Lilliefors p> .20

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BENZENE (log-tr~3.sta)

K-S d=.26025, p> .20; Lilliefors p> .20

TOLUENE (log-tr~3.sta)

K-S d=.26025, p> .20; Lilliefors p> .20

ALUMINUM (log-tr~3.sta)

K-S d=.23646, p> .20; Lilliefors p> .20

ANTIMONY (log-tr~3.sta)

K-S d=.22768, p> .20; Lilliefors p> .20

ARSENIC (log-tr~3.sta)

K-S d=.25271, p> .20; Lilliefors p> .20

BARIUM (log-tr~3.sta)

K-S d=.18626, p> .20; Lilliefors p> .20

CADMIUM (log-tr~3.sta)

K-S d=.37517, p> .20; Lilliefors p<.10

CALCIUM (log-tr~3.sta)

K-S d=.26785, p> .20; Lilliefors p> .20

CHROMIUM (log-tr~3.sta)

K-S d=.29723, p> .20; Lilliefors p> .20

COBALT (log-tr~3.sta)

K-S d=.25273, p> .20; Lilliefors p> .20

COPPER (log-tr~3.sta)

K-S d=.25983, p> .20; Lilliefors p> .20

IRON (log-tr~3.sta)

K-S d=.24232, p> .20; Lilliefors p> .20

LEAD (log-tr~3.sta)

K-S d=.39676, p> .20; Lilliefors p<.05

MAGNESIU (log-tr~3.sta)

K-S d=.26832, p> .20; Lilliefors p> .20

MANGANES (log-tr~3.sta)

K-S d=.26762, p> .20; Lilliefors p> .20

NICKEL (log-tr~3.sta)

K-S d=.33973, p> .20; Lilliefors p<.15

POTASSIU (log-tr~3.sta)

K-S d=.31717, p> .20; Lilliefors p<.20

SILVER (log-tr~3.sta)

K-S d=.27877, p> .20; Lilliefors p> .20

VANADIUM (log-tr~3.sta)

K-S d=.32020, p> .20; Lilliefors p<.15

ZINC (log-tr~3.sta)

K-S d=.31002, p> .20; Lilliefors p<.20

CYANIDE (log-tr~3.sta)

K-S d=.26240, p> .20; Lilliefors p> .20

METHYLEN (log-tr~4.sta)
K-S d=.33861, p<.10 ; Lilliefors p<.01

ACETONE (log-tr~4.sta)
K-S d=.43162, p<.01 ; Lilliefors p<.01

TOTAL_1_ (log-tr~4.sta)
K-S d=.40108, p<.05 ; Lilliefors p<.01

VAR4 (log-tr~4.sta)
K-S d=.53394, p<.01 ; Lilliefors p<.01

TRICHLOR (log-tr~4.sta)
K-S d=.37003, p<.05 ; Lilliefors p<.01

BENZENE (log-tr~4.sta)
K-S d=.33275, p<.10 ; Lilliefors p<.01

TOLUENE (log-tr~4.sta)
K-S d=.31700, p<.10 ; Lilliefors p<.01

VAR8 (log-tr~4.sta)
K-S d=.53394, p<.01 ; Lilliefors p<.01

BIS_2_ET (log-tr~4.sta)
K-S d=.46633, p<.01 ; Lilliefors p<.01

GAMMA_BH (log-tr~4.sta)
K-S d=.50988, p<.01 ; Lilliefors p<.01

ALUMINUM (log-tr~4.sta)
K-S d=.19724, p>.20; Lilliefors p<.15

ARSENIC (log-tr~4.sta)
K-S d=.19910, p>.20; Lilliefors p<.15

BARIUM (log-tr~4.sta)
K-S d=.15746, p>.20; Lilliefors p>.20

CADMIUM (log-tr~4.sta)
K-S d=.19935, p>.20; Lilliefors p<.15

CALCIUM (log-tr~4.sta)
K-S d=.26431, p>.20; Lilliefors p<.01

CHROMIUM (log-tr~4.sta)
K-S d=.24124, p>.20; Lilliefors p<.05

COBALT (log-tr~4.sta)
K-S d=.28255, p<.20 ; Lilliefors p<.01

COPPER (log-tr~4.sta)
K-S d=.25693, p>.20; Lilliefors p<.05

IRON (log-tr~4.sta)
K-S d=.11762, p>.20; Lilliefors p>.20

LEAD (log-tr~4.sta)
K-S d=.22479, p>.20; Lilliefors p<.10

MAGNESIU (log-tr~4.sta)
K-S d=.33715, p<.10 ; Lilliefors p<.01

MANGANES (log-tr~4.sta)
K-S d=.13968, p>.20; Lilliefors p>.20

MERCURY (log-tr~4.sta)
K-S d=.46807, p<.01 ; Lilliefors p<.01

NICKEL (log-tr~4.sta)
K-S d=.19897, p>.20; Lilliefors p<.15

POTASSIU (log-tr~4.sta)
K-S d=.19419, p>.20; Lilliefors p<.15

SILVER (log-tr~4.sta)
K-S d=.40032, p<.05 ; Lilliefors p<.01

SODIUM (log-tr~4.sta)
K-S d=.22296, p>.20; Lilliefors p<.10

VANADIUM (log-tr~4.sta)
K-S d=.19072, p>.20; Lilliefors p<.20

ZINC (log-tr~4.sta)
K-S d=.17815, p>.20; Lilliefors p>.20

CYANIDE (log-tr~4.sta)
K-S d=.24177, p>.20; Lilliefors p<.05



Eastern Lagoon Subsurface

METHYLEN (log-tr~5.sta)
K-S d=.12675, p> .20; Lilliefors p<.20

ACETONE (log-tr~5.sta)
K-S d=.17068, p> .20; Lilliefors p<.05

CARBON_D (log-tr~5.sta)
K-S d=.22671, p<.05 ; Lilliefors p<.01

CHLOROFO (log-tr~5.sta)
K-S d=.24835, p<.05 ; Lilliefors p<.01

VAR5 (log-tr~5.sta)
K-S d=.30595, p<.01 ; Lilliefors p<.01

TRICHLOR (log-tr~5.sta)
K-S d=.17717, p> .20; Lilliefors p<.01

BENZENE (log-tr~5.sta)
K-S d=.20511, p<.10 ; Lilliefors p<.01

TETRACHL (log-tr~5.sta)
K-S d=.22062, p<.10 ; Lilliefors p<.01

VAR9 (log-tr~5.sta)
K-S d=.22574, p<.10 ; Lilliefors p<.01

TOLUENE (log-tr~5.sta)
K-S d=.22486, p<.10 ; Lilliefors p<.01

CHLOROBE (log-tr~5.sta)
K-S d=.22048, p<.10 ; Lilliefors p<.01

ETHYLBEN (log-tr~5.sta)
K-S d=.25455, p<.05 ; Lilliefors p<.01

TOTAL_XY (log-tr~5.sta)
K-S d=.19258, p<.15 ; Lilliefors p<.01

VAR14 (log-tr~5.sta)
K-S d=.20759, p<.15 ; Lilliefors p<.01

VAR15 (log-tr~5.sta)
K-S d=.20644, p<.15 ; Lilliefors p<.01

VAR16 (log-tr~5.sta)
K-S d=.17972, p> .20; Lilliefors p<.01

NAPHTHAL (log-tr~5.sta)
K-S d=.21388, p<.10 ; Lilliefors p<.01

VAR18 (log-tr~5.sta)
K-S d=.20927, p<.15 ; Lilliefors p<.01

ACENAPHT (log-tr~5.sta)
K-S d=.22888, p<.10 ; Lilliefors p<.01

ACENAPHT (log-tr~5.sta)
K-S d=.19822, p<.15 ; Lilliefors p<.01

VAR21 (log-tr~5.sta)
K-S d=.21198, p<.10 ; Lilliefors p<.01

DIBENZOF (log-tr~5.sta)
K-S d=.19676, p<.15 ; Lilliefors p<.01

FLUORENE (log-tr~5.sta)
K-S d=.20539, p<.15 ; Lilliefors p<.01

PHENANTH (log-tr~5.sta)
K-S d=.19259, p<.15 ; Lilliefors p<.01

ANTHRACE (log-tr~5.sta)
K-S d=.19910, p<.15 ; Lilliefors p<.01

FLUORANT (log-tr~5.sta)
K-S d=.19675, p<.15 ; Lilliefors p<.01

PYRENE (log-tr~5.sta)
K-S d=.19559, p<.15 ; Lilliefors p<.01

BENZO_A_ (log-tr~5.sta)
K-S d=.16305, p> .20; Lilliefors p<.05

CHRYSENE (log-tr~5.sta)
K-S d=.17250, p> .20; Lilliefors p<.05

BIS_2_ET (log-tr~5.sta)
K-S d=.23201, p<.05 ; Lilliefors p<.01

DI_N_OCT (log-tr~5.sta)
K-S d=.19593, p<.15 ; Lilliefors p<.01

BENZO_B_ (log-tr~5.sta)
K-S d=.17589, p> .20; Lilliefors p<.01

BENZO_K_ (log-tr~5.sta)
K-S d=.20974, p<.15 ; Lilliefors p<.01

BENZO_A_ (log-tr~5.sta)
K-S d=.20126, p<.15 ; Lilliefors p<.01

INDENO_1 (log-tr~5.sta)
K-S d=.20819, p<.15 ; Lilliefors p<.01

DIBENZ_A (log-tr~5.sta)
K-S d=.20617, p<.15 ; Lilliefors p<.01

BENZO_G_ (log-tr~5.sta)
K-S d=.15904, p>.20; Lilliefors p<.05

BETA_BHC (log-tr~5.sta)
K-S d=.28342, p<.01 ; Lilliefors p<.01

GAMMA_BH (log-tr~5.sta)
K-S d=.26771, p<.05 ; Lilliefors p<.01

HEPTACHL (log-tr~5.sta)
K-S d=.26554, p<.05 ; Lilliefors p<.01

ALDRIN (log-tr~5.sta)
K-S d=.29851, p<.01 ; Lilliefors p<.01

HEPTACHL (log-tr~5.sta)
K-S d=.27419, p<.01 ; Lilliefors p<.01

ENDOSULF (log-tr~5.sta)
K-S d=.28256, p<.01 ; Lilliefors p<.01

DIELDRIN (log-tr~5.sta)
K-S d=.31083, p<.01 ; Lilliefors p<.01

VAR45 (log-tr~5.sta)
K-S d=.24960, p<.05 ; Lilliefors p<.01

ENDRIN (log-tr~5.sta)
K-S d=.30251, p<.01 ; Lilliefors p<.01

VAR47 (log-tr~5.sta)
K-S d=.26371, p<.05 ; Lilliefors p<.01

VAR48 (log-tr~5.sta)
K-S d=.29534, p<.01 ; Lilliefors p<.01

COBALT (log-tr~5.sta)

METHOXYC (log-tr~5.sta)
K-S d=.24959, p<.05 ; Lilliefors p<.01

ENDRIN_K (log-tr~5.sta)
K-S d=.29882, p<.01 ; Lilliefors p<.01

ALPHA_CH (log-tr~5.sta)
K-S d=.32590, p<.01 ; Lilliefors p<.01

GAMMA_CH (log-tr~5.sta)
K-S d=.32272, p<.01 ; Lilliefors p<.01

AROCLOLOR (log-tr~5.sta)
K-S d=.28192, p<.01 ; Lilliefors p<.01

AROCLOLOR (log-tr~5.sta)
K-S d=.28026, p<.01 ; Lilliefors p<.01

AROCLOLOR (log-tr~5.sta)
K-S d=.23754, p<.05 ; Lilliefors p<.01

ENDRIN_A (log-tr~5.sta)
K-S d=.36503, p<.01 ; Lilliefors p<.01

ALUMINUM (log-tr~5.sta)
K-S d=.16415, p>.20; Lilliefors p<.05

ANTIMONY (log-tr~5.sta)
K-S d=.18891, p<.20 ; Lilliefors p<.01

ARSENIC (log-tr~5.sta)
K-S d=.09587, p>.20; Lilliefors p>.20

BARIUM (log-tr~5.sta)
K-S d=.18563, p<.20 ; Lilliefors p<.01

BERYLLIU (log-tr~5.sta)
K-S d=.33906, p<.01 ; Lilliefors p<.01

CADMIUM (log-tr~5.sta)
K-S d=.08354, p>.20; Lilliefors p>.20

CALCIUM (log-tr~5.sta)
K-S d=.12620, p>.20; Lilliefors p<.20

CHROMIUM (log-tr~5.sta)
K-S d=.10842, p>.20; Lilliefors p>.20

K-S d=.08196, p> .20; Lilliefors p> .20

COPPER (log-tr~5.sta)

K-S d=.19923, p<.15 ; Lilliefors p<.01

IRON (log-tr~5.sta)

K-S d=.14279, p> .20; Lilliefors p<.10

LEAD (log-tr~5.sta)

K-S d=.23702, p<.05 ; Lilliefors p<.01

MAGNESIU (log-tr~5.sta)

K-S d=.09721, p> .20; Lilliefors p> .20

MANGANES (log-tr~5.sta)

K-S d=.14849, p> .20; Lilliefors p<.10

MERCURY (log-tr~5.sta)

K-S d=.40003, p<.01 ; Lilliefors p<.01

NICKEL (log-tr~5.sta)

K-S d=.12933, p> .20; Lilliefors p<.20

POTASSIU (log-tr~5.sta)

K-S d=.11959, p> .20; Lilliefors p> .20

SILVER (log-tr~5.sta)

K-S d=.24176, p<.05 ; Lilliefors p<.01

SODIUM (log-tr~5.sta)

K-S d=.12566, p> .20; Lilliefors p<.20

THALLIUM (log-tr~5.sta)

K-S d=.28517, p<.01 ; Lilliefors p<.01

VANADIUM (log-tr~5.sta)

K-S d=.13956, p> .20; Lilliefors p<.10

ZINC (log-tr~5.sta)

K-S d=.15544, p> .20; Lilliefors p<.05

CYANIDE (log-tr~5.sta)

K-S d=.13744, p> .20; Lilliefors p<.10

ACETONE (log-tr~6.sta) K-S d=.35755, p<.15 ; Lilliefors p<.01	BIS_2_ET (log-tr~6.sta) K-S d=.24029, p> .20; Lilliefors p<.10
CARBON_D (log-tr~6.sta) K-S d=.31676, p> .20; Lilliefors p<.01	DI_N_OCT (log-tr~6.sta) K-S d=.15333, p> .20; Lilliefors p> .20
VAR3 (log-tr~6.sta) K-S d=.13741, p> .20; Lilliefors p> .20	BENZO_B_ (log-tr~6.sta) K-S d=.14265, p> .20; Lilliefors p> .20
BENZENE (log-tr~6.sta) K-S d=.15354, p> .20; Lilliefors p> .20	BENZO_K_ (log-tr~6.sta) K-S d=.18316, p> .20; Lilliefors p> .20
TOLUENE (log-tr~6.sta) K-S d=.20721, p> .20; Lilliefors p> .20	HEPTACHL (log-tr~6.sta) K-S d=.16537, p> .20; Lilliefors p> .20
VAR6 (log-tr~6.sta) K-S d=.27244, p> .20; Lilliefors p<.05	PCB_1254 (log-tr~6.sta) K-S d=.15629, p> .20; Lilliefors p> .20
BENZOIC (log-tr~6.sta) K-S d=.30646, p> .20; Lilliefors p<.01	ALUMINUM (log-tr~6.sta) K-S d=.18955, p> .20; Lilliefors p> .20
VAR8 (log-tr~6.sta) K-S d=.28193, p> .20; Lilliefors p<.05	ANTIMONY (log-tr~6.sta) K-S d=.18743, p> .20; Lilliefors p> .20
ACENAPHT (log-tr~6.sta) K-S d=.24238, p> .20; Lilliefors p<.10	ARSENIC (log-tr~6.sta) K-S d=.27898, p> .20; Lilliefors p<.05
PHENANTH (log-tr~6.sta) K-S d=.21410, p> .20; Lilliefors p> .20	BARIUM (log-tr~6.sta) K-S d=.15441, p> .20; Lilliefors p> .20
ANTHRACE (log-tr~6.sta) K-S d=.24608, p> .20; Lilliefors p<.10	CADMIUM (log-tr~6.sta) K-S d=.20371, p> .20; Lilliefors p> .20
DI_N_BUT (log-tr~6.sta) K-S d=.25194, p> .20; Lilliefors p<.10	CALCIUM (log-tr~6.sta) K-S d=.17371, p> .20; Lilliefors p> .20
FLUORANT (log-tr~6.sta) K-S d=.13114, p> .20; Lilliefors p> .20	CHROMIUM (log-tr~6.sta) K-S d=.17086, p> .20; Lilliefors p> .20
PYRENE (log-tr~6.sta) K-S d=.31591, p> .20; Lilliefors p<.01	COBALT (log-tr~6.sta) K-S d=.21930, p> .20; Lilliefors p<.20
BENZO_A_ (log-tr~6.sta) K-S d=.14265, p> .20; Lilliefors p> .20	COPPER (log-tr~6.sta) K-S d=.22807, p> .20; Lilliefors p<.15
CHRYSENE (log-tr~6.sta) K-S d=.14265, p> .20; Lilliefors p> .20	IRON (log-tr~6.sta) K-S d=.19444, p> .20; Lilliefors p> .20

LEAD (log-tr~6.sta)

K-S d=.18088, p> .20; Lilliefors p> .20

MAGNESIU (log-tr~6.sta)

K-S d=.22873, p> .20; Lilliefors p<.15

MANGANES (log-tr~6.sta)

K-S d=.19525, p> .20; Lilliefors p> .20

MERCURY (log-tr~6.sta)

K-S d=.22672, p> .20; Lilliefors p<.15

NICKEL (log-tr~6.sta)

K-S d=.18213, p> .20; Lilliefors p> .20

POTASSIU (log-tr~6.sta)

K-S d=.26809, p> .20; Lilliefors p<.05

SILVER (log-tr~6.sta)

K-S d=.31138, p> .20; Lilliefors p<.01

SODIUM (log-tr~6.sta)

K-S d=.18550, p> .20; Lilliefors p> .20

VANADIUM (log-tr~6.sta)

K-S d=.24797, p> .20; Lilliefors p<.10

ZINC (log-tr~6.sta)

K-S d=.18064, p> .20; Lilliefors p> .20

CYANIDE (log-tr~6.sta)

K-S d=.17299, p> .20; Lilliefors p> .20

ACETONE (log-tr~7.sta) K-S d=.38482, p> .20; Lilliefors p<.05	CHROMIUM (log-tr~7.sta) K-S d=.25902, p> .20; Lilliefors p> .20
BENZENE (log-tr~7.sta) K-S d=.23519, p> .20; Lilliefors p> .20	COBALT (log-tr~7.sta) K-S d=.37732, p> .20; Lilliefors p<.10
TOLUENE (log-tr~7.sta) K-S d=.29228, p> .20; Lilliefors p> .20	COPPER (log-tr~7.sta) K-S d=.18291, p> .20; Lilliefors p> .20
NAPHTHAL (log-tr~7.sta) K-S d=.38239, p> .20; Lilliefors p<.05	IRON (log-tr~7.sta) K-S d=.30258, p> .20; Lilliefors p<.20
VAR5 (log-tr~7.sta) K-S d=.37663, p> .20; Lilliefors p<.10	LEAD (log-tr~7.sta) K-S d=.18665, p> .20; Lilliefors p> .20
PHENANTH (log-tr~7.sta) K-S d=.38086, p> .20; Lilliefors p<.10	MAGNESIU (log-tr~7.sta) K-S d=.37431, p> .20; Lilliefors p<.10
DI_N_BUT (log-tr~7.sta) K-S d=.37738, p> .20; Lilliefors p<.10	MANGANES (log-tr~7.sta) K-S d=.36634, p> .20; Lilliefors p<.10
AROCLOR_ (log-tr~7.sta) K-S d=.31680, p> .20; Lilliefors p<.20	NICKEL (log-tr~7.sta) K-S d=.22577, p> .20; Lilliefors p> .20
ALUMINUM (log-tr~7.sta) K-S d=.18188, p> .20; Lilliefors p> .20	POTASSIU (log-tr~7.sta) K-S d=.33845, p> .20; Lilliefors p<.15
ANTIMONY (log-tr~7.sta) K-S d=.38482, p> .20; Lilliefors p<.05	SILVER (log-tr~7.sta) K-S d=.38482, p> .20; Lilliefors p<.05
ARSENIC (log-tr~7.sta) K-S d=.31853, p> .20; Lilliefors p<.20	VANADIUM (log-tr~7.sta) K-S d=.28493, p> .20; Lilliefors p> .20
BARIUM (log-tr~7.sta) K-S d=.35872, p> .20; Lilliefors p<.10	ZINC (log-tr~7.sta) K-S d=.17690, p> .20; Lilliefors p> .20
CADMIUM (log-tr~7.sta) K-S d=.37176, p> .20; Lilliefors p<.10	CYANIDE (log-tr~7.sta) K-S d=.17985, p> .20; Lilliefors p> .20
CALCIUM (log-tr~7.sta) K-S d=.26378, p> .20; Lilliefors p> .20	

VINYL_CH (log-tr~8.sta)	IRON (log-tr~8.sta)
K-S d=.43123, p<.01 ; Lilliefors p<.01	K-S d=.19993, p> .20; Lilliefors p<.05
TOTAL_1_ (log-tr~8.sta)	LEAD (log-tr~8.sta)
K-S d=.17519, p> .20; Lilliefors p<.10	K-S d=.21128, p<.20 ; Lilliefors p<.01
TRICHLOR (log-tr~8.sta)	MAGNESIU (log-tr~8.sta)
K-S d=.14490, p> .20; Lilliefors p> .20	K-S d=.12486, p> .20; Lilliefors p> .20
BIS_2_ET (log-tr~8.sta)	MANGANES (log-tr~8.sta)
K-S d=.36566, p<.01 ; Lilliefors p<.01	K-S d=.19572, p> .20; Lilliefors p<.05
ALUMINUM (log-tr~8.sta)	NICKEL (log-tr~8.sta)
K-S d=.17377, p> .20; Lilliefors p<.10	K-S d=.16135, p> .20; Lilliefors p<.15
ARSENIC (log-tr~8.sta)	POTASSIU (log-tr~8.sta)
K-S d=.14346, p> .20; Lilliefors p> .20	K-S d=.13264, p> .20; Lilliefors p> .20
BARIUM (log-tr~8.sta)	SELENIUM (log-tr~8.sta)
K-S d=.16050, p> .20; Lilliefors p<.15	K-S d=.28803, p<.05 ; Lilliefors p<.01
CADMIUM (log-tr~8.sta)	SODIUM (log-tr~8.sta)
K-S d=.32483, p<.01 ; Lilliefors p<.01	K-S d=.13499, p> .20; Lilliefors p> .20
CALCIUM (log-tr~8.sta)	ZINC (log-tr~8.sta)
K-S d=.19070, p> .20; Lilliefors p<.05	K-S d=.17531, p> .20; Lilliefors p<.10
CHROMIUM (log-tr~8.sta)	CYANIDE (log-tr~8.sta)
K-S d=.39323, p<.01 ; Lilliefors p<.01	K-S d=.36807, p<.01 ; Lilliefors p<.01
COPPER (log-tr~8.sta)	
K-S d=.29166, p<.05 ; Lilliefors p<.01	

ATTACHMENT 2

Eastern Lagoon Sludge - Data

Exposure Event	Exposure Concentrations																				Average
	5.1	106.0	5.1	8.6	126.0	317.0	26.0	317.0	49.0	8.6	106.0	26.0	317.0	317.0	22.0	317.0	106.0	18.0	49.0	8.6	
1	5.1	106.0	5.1	8.6	126.0	317.0	26.0	317.0	49.0	8.6	106.0	26.0	317.0	317.0	22.0	317.0	106.0	18.0	49.0	8.6	112.8
2	126.0	5.1	26.0	18.0	22.0	317.0	16.0	317.0	16.0	16.0	26.0	49.0	49.0	16.0	317.0	22.0	317.0	16.0	49.0	49.0	89.5
3	26.0	18.0	106.0	106.0	16.0	106.0	26.0	22.0	5.1	5.1	22.0	18.0	26.0	26.0	106.0	22.0	5.1	126.0	16.0	22.0	41.3
4	317.0	18.0	16.0	5.1	26.0	18.0	126.0	16.0	106.0	49.0	22.0	16.0	18.0	49.0	49.0	22.0	22.0	5.1	49.0	5.1	47.7
5	126.0	22.0	49.0	126.0	16.0	8.6	18.0	49.0	106.0	26.0	26.0	106.0	26.0	5.1	8.6	16.0	5.1	8.6	5.1	126.0	44.0
6	16.0	22.0	106.0	317.0	8.6	5.1	106.0	49.0	16.0	26.0	5.1	22.0	8.6	49.0	126.0	16.0	126.0	16.0	126.0	16.0	59.1
7	18.0	106.0	8.6	126.0	18.0	317.0	26.0	18.0	22.0	49.0	106.0	106.0	5.1	5.1	18.0	16.0	317.0	317.0	5.1	85.5	
8	16.0	8.6	106.0	26.0	16.0	126.0	49.0	49.0	106.0	16.0	106.0	49.0	49.0	22.0	5.1	22.0	49.0	106.0	317.0	126.0	68.5
9	106.0	106.0	106.0	8.6	16.0	317.0	106.0	49.0	22.0	5.1	49.0	16.0	26.0	49.0	22.0	49.0	5.1	49.0	106.0	126.0	66.9
10	16.0	106.0	22.0	26.0	126.0	5.1	5.1	49.0	106.0	8.6	49.0	49.0	26.0	317.0	22.0	5.1	49.0	8.6	8.6	26.0	51.5
11	106.0	317.0	126.0	126.0	317.0	5.1	16.0	8.6	49.0	5.1	22.0	5.1	317.0	126.0	8.6	8.6	16.0	106.0	106.0	16.0	90.4
12	16.0	49.0	26.0	317.0	16.0	49.0	22.0	49.0	106.0	18.0	22.0	317.0	317.0	106.0	22.0	8.6	106.0	26.0	18.0	106.0	85.8
13	126.0	18.0	126.0	22.0	126.0	5.1	8.6	26.0	106.0	126.0	26.0	5.1	18.0	106.0	8.6	126.0	317.0	8.6	22.0	106.0	71.7
14	16.0	106.0	106.0	317.0	16.0	5.1	16.0	26.0	317.0	8.6	317.0	49.0	5.1	317.0	49.0	16.0	16.0	106.0	126.0	18.0	97.6
15	49.0	18.0	8.6	5.1	5.1	106.0	8.6	5.1	22.0	18.0	317.0	16.0	26.0	16.0	106.0	8.6	16.0	317.0	126.0	26.0	61.0
16	106.0	22.0	106.0	18.0	8.6	16.0	126.0	18.0	49.0	22.0	49.0	317.0	49.0	8.6	106.0	5.1	8.6	26.0	8.6	8.6	53.9
17	126.0	16.0	49.0	22.0	22.0	26.0	317.0	106.0	106.0	22.0	22.0	317.0	5.1	22.0	106.0	106.0	49.0	5.1	16.0	5.1	73.3
18	26.0	49.0	317.0	18.0	22.0	106.0	26.0	8.6	126.0	16.0	8.6	26.0	8.6	22.0	8.6	126.0	18.0	16.0	49.0	18.0	50.8
19	26.0	126.0	5.1	49.0	126.0	5.1	5.1	18.0	49.0	5.1	22.0	317.0	106.0	317.0	317.0	16.0	8.6	16.0	16.0	26.0	78.8
20	8.6	49.0	8.6	18.0	126.0	26.0	126.0	18.0	26.0	49.0	106.0	18.0	18.0	16.0	26.0	49.0	317.0	317.0	18.0	8.6	67.4
21	26.0	16.0	126.0	16.0	5.1	26.0	22.0	106.0	26.0	26.0	317.0	317.0	106.0	317.0	49.0	16.0	22.0	106.0	8.6	16.0	83.5
22	8.6	5.1	317.0	22.0	22.0	8.6	5.1	22.0	126.0	22.0	126.0	18.0	49.0	49.0	26.0	16.0	317.0	8.6	106.0	26.0	65.0
23	8.6	5.1	16.0	18.0	26.0	106.0	18.0	317.0	106.0	18.0	26.0	22.0	8.6	317.0	18.0	16.0	49.0	8.6	106.0	126.0	66.8
24	26.0	16.0	5.1	5.1	22.0	317.0	106.0	18.0	22.0	317.0	317.0	26.0	5.1	126.0	106.0	49.0	126.0	5.1	8.6	16.0	82.0
25	26.0	126.0	106.0	317.0	126.0	26.0	18.0	49.0	16.0	49.0	26.0	26.0	106.0	126.0	26.0	26.0	5.1	18.0	49.0	126.0	69.7
26	126.0	16.0	126.0	26.0	106.0	49.0	49.0	8.6	5.1	106.0	126.0	317.0	317.0	5.1	18.0	5.1	26.0	8.6	26.0	126.0	79.6
27	126.0	18.0	106.0	26.0	5.1	106.0	49.0	22.0	8.6	5.1	5.1	49.0	317.0	18.0	22.0	49.0	317.0	49.0	49.0	126.0	73.6
28	5.1	8.6	5.1	18.0	106.0	8.6	106.0	8.6	106.0	106.0	126.0	49.0	16.0	26.0	126.0	8.6	16.0	22.0	8.6	8.6	44.2
29	106.0	317.0	26.0	16.0	106.0	49.0	317.0	49.0	18.0	8.6	16.0	18.0	22.0	106.0	317.0	16.0	5.1	16.0	49.0	126.0	85.2
30	22.0	16.0	18.0	317.0	18.0	5.1	8.6	106.0	49.0	106.0	49.0	16.0	18.0	22.0	26.0	49.0	106.0	18.0	18.0	22.0	50.5
31	8.6	26.0	22.0	126.0	18.0	49.0	18.0	18.0	16.0	126.0	5.1	26.0	126.0	22.0	22.0	22.0	49.0	5.1	106.0	5.1	40.8
32	317.0	26.0	16.0	317.0	5.1	106.0	126.0	26.0	22.0	18.0	317.0	106.0	317.0	126.0	126.0	317.0	18.0	317.0	26.0	126.0	138.8
33	18.0	8.6	5.1	26.0	126.0	8.6	317.0	22.0	22.0	126.0	106.0	8.6	126.0	5.1	22.0	22.0	26.0	49.0	5.1	18.0	53.4
34	18.0	18.0	106.0	18.0	22.0	126.0	22.0	18.0	26.0	18.0	22.0	16.0	26.0	317.0	16.0	106.0	49.0	16.0	22.0	49.0	51.6
35	8.6	16.0	26.0	8.6	5.1	26.0	317.0	49.0	18.0	317.0	26.0	5.1	18.0	8.6	22.0	5.1	26.0	8.6	16.0	5.1	46.6
36	22.0	106.0	317.0	126.0	49.0	26.0	49.0	106.0	5.1	317.0	22.0	126.0	16.0	5.1	106.0	16.0	5.1	26.0	317.0	22.0	89.2



Eastern Lagoon Sludge - Data

Exposure Event	Exposure Concentrations																				Average
	37	18.0	18.0	5.1	26.0	317.0	106.0	16.0	106.0	16.0	106.0	8.6	317.0	16.0	22.0	8.6	16.0	5.1	22.0	18.0	106.0
38	22.0	18.0	106.0	317.0	26.0	8.6	317.0	106.0	16.0	49.0	106.0	106.0	126.0	22.0	126.0	22.0	22.0	26.0	49.0	18.0	80.4
39	22.0	8.6	22.0	16.0	22.0	8.6	8.6	16.0	22.0	26.0	16.0	18.0	18.0	16.0	49.0	49.0	26.0	49.0	106.0	22.0	27.0
40	16.0	106.0	5.1	317.0	18.0	5.1	26.0	5.1	5.1	317.0	8.6	106.0	5.1	106.0	22.0	8.6	5.1	22.0	18.0	317.0	71.9
41	49.0	18.0	5.1	126.0	22.0	5.1	49.0	126.0	8.6	126.0	317.0	22.0	22.0	106.0	8.6	106.0	5.1	49.0	106.0	16.0	64.6
42	8.6	106.0	317.0	22.0	126.0	317.0	18.0	22.0	106.0	49.0	317.0	49.0	22.0	126.0	22.0	106.0	18.0	18.0	106.0	26.0	95.1
43	317.0	126.0	16.0	106.0	126.0	22.0	126.0	26.0	126.0	26.0	126.0	26.0	49.0	106.0	5.1	5.1	317.0	8.6	18.0	49.0	86.3
44	49.0	18.0	5.1	26.0	126.0	5.1	16.0	49.0	126.0	106.0	126.0	26.0	106.0	16.0	22.0	26.0	5.1	16.0	22.0	126.0	50.9
45	317.0	8.6	5.1	8.6	317.0	49.0	26.0	126.0	5.1	18.0	26.0	49.0	22.0	317.0	106.0	22.0	8.6	317.0	18.0	18.0	89.2
46	18.0	26.0	8.6	5.1	26.0	49.0	26.0	26.0	106.0	22.0	22.0	5.1	8.6	5.1	8.6	317.0	126.0	5.1	126.0	22.0	47.9
47	317.0	16.0	16.0	26.0	18.0	16.0	18.0	106.0	49.0	106.0	5.1	22.0	22.0	317.0	18.0	317.0	5.1	5.1	317.0	317.0	101.7
48	106.0	22.0	5.1	49.0	18.0	16.0	22.0	317.0	26.0	22.0	5.1	18.0	16.0	26.0	18.0	317.0	8.6	8.6	49.0	49.0	55.9
49	49.0	22.0	49.0	126.0	49.0	317.0	5.1	22.0	49.0	126.0	26.0	126.0	22.0	18.0	18.0	49.0	317.0	106.0	16.0	22.0	76.7
50	8.6	16.0	8.6	5.1	8.6	26.0	126.0	49.0	18.0	18.0	126.0	26.0	22.0	8.6	18.0	317.0	317.0	49.0	16.0	106.0	64.5
51	18.0	49.0	106.0	8.6	18.0	126.0	16.0	16.0	22.0	106.0	8.6	22.0	106.0	16.0	106.0	5.1	5.1	26.0	22.0	106.0	45.4
52	317.0	18.0	16.0	126.0	26.0	126.0	8.6	18.0	5.1	26.0	22.0	106.0	16.0	22.0	18.0	49.0	22.0	126.0	18.0	8.6	54.7
53	22.0	18.0	8.6	49.0	18.0	26.0	18.0	26.0	26.0	22.0	106.0	49.0	26.0	106.0	18.0	26.0	22.0	18.0	126.0	49.0	39.0
54	18.0	18.0	317.0	18.0	18.0	126.0	16.0	8.6	126.0	16.0	49.0	26.0	317.0	5.1	317.0	18.0	106.0	22.0	26.0	317.0	94.2
55	22.0	126.0	26.0	22.0	8.6	8.6	126.0	317.0	5.1	26.0	18.0	18.0	5.1	5.1	22.0	126.0	18.0	8.6	106.0	5.1	51.0
56	106.0	126.0	317.0	26.0	317.0	317.0	8.6	8.6	26.0	16.0	106.0	22.0	16.0	16.0	16.0	5.1	16.0	126.0	317.0	22.0	96.5
57	22.0	8.6	22.0	106.0	26.0	126.0	26.0	22.0	5.1	317.0	16.0	49.0	126.0	18.0	16.0	317.0	26.0	16.0	16.0	8.6	64.5
58	126.0	5.1	5.1	49.0	5.1	16.0	317.0	16.0	26.0	26.0	18.0	317.0	5.1	106.0	126.0	5.1	5.1	49.0	16.0	317.0	77.8
59	18.0	126.0	317.0	22.0	18.0	106.0	22.0	49.0	16.0	5.1	8.6	5.1	16.0	18.0	8.6	26.0	5.1	49.0	317.0	22.0	58.7
60	126.0	317.0	8.6	5.1	26.0	18.0	106.0	22.0	317.0	26.0	26.0	317.0	5.1	8.6	5.1	106.0	106.0	49.0	22.0	26.0	82.1
61	8.6	16.0	16.0	5.1	106.0	22.0	106.0	5.1	8.6	22.0	18.0	26.0	49.0	49.0	22.0	22.0	126.0	106.0	22.0	26.0	39.1
62	317.0	106.0	8.6	49.0	126.0	126.0	106.0	16.0	26.0	106.0	106.0	5.1	22.0	26.0	8.6	16.0	16.0	22.0	49.0	8.6	63.3
63	26.0	317.0	317.0	18.0	26.0	106.0	106.0	18.0	18.0	8.6	5.1	26.0	8.6	106.0	106.0	8.6	126.0	49.0	317.0	26.0	86.9
64	8.6	16.0	18.0	5.1	126.0	18.0	26.0	18.0	8.6	49.0	49.0	22.0	18.0	16.0	26.0	22.0	26.0	22.0	317.0	49.0	43.0
65	317.0	8.6	16.0	317.0	26.0	26.0	49.0	22.0	106.0	106.0	49.0	317.0	18.0	5.1	22.0	8.6	49.0	106.0	106.0	5.1	84.0
66	8.6	18.0	22.0	106.0	16.0	317.0	16.0	8.6	8.6	16.0	26.0	22.0	317.0	8.6	317.0	16.0	317.0	18.0	26.0	49.0	82.7
67	106.0	126.0	26.0	5.1	22.0	18.0	5.1	49.0	5.1	49.0	16.0	22.0	16.0	106.0	8.6	26.0	8.6	5.1	5.1	16.0	32.0
68	26.0	16.0	126.0	5.1	5.1	106.0	18.0	18.0	26.0	8.6	5.1	317.0	106.0	8.6	126.0	106.0	5.1	49.0	26.0	106.0	60.5
69	106.0	16.0	8.6	317.0	49.0	16.0	26.0	126.0	8.6	8.6	317.0	49.0	106.0	18.0	26.0	106.0	5.1	22.0	8.6	49.0	69.4
70	16.0	18.0	5.1	18.0	317.0	317.0	16.0	18.0	5.1	317.0	317.0	18.0	126.0	126.0	18.0	317.0	22.0	22.0	22.0	16.0	102.6
71	106.0	317.0	8.6	317.0	317.0	106.0	126.0	22.0	8.6	317.0	26.0	106.0	49.0	49.0	106.0	22.0	18.0	18.0	26.0	106.0	108.6
72	106.0	5.1	22.0	126.0	22.0	317.0	22.0	126.0	22.0	126.0	126.0	49.0	16.0	16.0	5.1	22.0	49.0	22.0	26.0	26.0	62.6

Eastern Lagoon Sludge - Data

Exposure Event	Exposure Concentrations																				Average
	73	49.0	317.0	106.0	18.0	8.6	126.0	126.0	5.1	22.0	18.0	26.0	49.0	5.1	49.0	22.0	5.1	49.0	317.0	126.0	22.0
74	5.1	22.0	126.0	49.0	16.0	49.0	5.1	18.0	22.0	317.0	26.0	18.0	126.0	16.0	16.0	8.6	5.1	106.0	22.0	22.0	49.7
75	18.0	26.0	5.1	5.1	106.0	22.0	106.0	49.0	317.0	22.0	22.0	18.0	5.1	49.0	317.0	18.0	5.1	26.0	8.6	5.1	57.5
76	106.0	8.6	49.0	5.1	5.1	317.0	49.0	5.1	126.0	317.0	16.0	5.1	317.0	18.0	5.1	106.0	22.0	16.0	49.0	317.0	93.0
77	26.0	26.0	16.0	18.0	8.6	22.0	49.0	126.0	8.6	16.0	22.0	5.1	317.0	22.0	8.6	16.0	26.0	49.0	5.1	5.1	39.6
78	5.1	26.0	317.0	5.1	317.0	317.0	8.6	49.0	26.0	26.0	49.0	8.6	18.0	126.0	49.0	106.0	8.6	8.6	126.0	106.0	85.1
79	18.0	317.0	5.1	126.0	317.0	106.0	5.1	317.0	22.0	5.1	49.0	126.0	106.0	5.1	16.0	22.0	16.0	18.0	106.0	18.0	86.0
80	16.0	26.0	317.0	22.0	126.0	22.0	5.1	5.1	26.0	18.0	16.0	49.0	8.6	317.0	18.0	16.0	106.0	317.0	106.0	22.0	77.9
81	106.0	106.0	126.0	8.6	18.0	8.6	8.6	317.0	5.1	8.6	106.0	8.6	49.0	26.0	26.0	106.0	126.0	8.6	22.0	49.0	62.0
82	317.0	8.6	8.6	317.0	18.0	126.0	317.0	49.0	106.0	8.6	16.0	18.0	16.0	49.0	49.0	8.6	126.0	22.0	126.0	8.6	85.8
83	49.0	317.0	49.0	126.0	18.0	5.1	26.0	8.6	26.0	26.0	16.0	8.6	16.0	26.0	16.0	22.0	22.0	8.6	22.0	16.0	41.2
84	16.0	49.0	5.1	317.0	26.0	106.0	22.0	126.0	8.6	22.0	16.0	49.0	26.0	317.0	22.0	126.0	317.0	49.0	106.0	317.0	102.1
85	18.0	106.0	16.0	22.0	126.0	26.0	16.0	18.0	8.6	317.0	49.0	5.1	16.0	22.0	126.0	317.0	18.0	49.0	22.0	26.0	66.2
86	8.6	126.0	22.0	26.0	8.6	22.0	317.0	106.0	49.0	49.0	8.6	8.6	5.1	26.0	49.0	16.0	18.0	26.0	5.1	26.0	46.1
87	22.0	126.0	18.0	49.0	16.0	18.0	16.0	5.1	106.0	317.0	126.0	8.6	317.0	8.6	126.0	8.6	106.0	106.0	126.0	49.0	83.7
88	8.6	106.0	16.0	49.0	22.0	106.0	49.0	49.0	8.6	26.0	106.0	18.0	126.0	26.0	49.0	5.1	317.0	18.0	106.0	317.0	76.4
89	106.0	16.0	317.0	317.0	22.0	22.0	317.0	22.0	5.1	126.0	26.0	106.0	22.0	26.0	106.0	8.6	317.0	126.0	5.1	16.0	101.4
90	18.0	317.0	18.0	126.0	8.6	49.0	16.0	317.0	49.0	22.0	16.0	16.0	49.0	317.0	8.6	22.0	18.0	106.0	126.0	18.0	81.9
91	126.0	126.0	49.0	317.0	8.6	126.0	5.1	5.1	18.0	317.0	126.0	317.0	49.0	16.0	106.0	26.0	26.0	5.1	106.0	5.1	94.0
92	8.6	16.0	49.0	49.0	5.1	49.0	5.1	22.0	18.0	126.0	5.1	317.0	22.0	5.1	22.0	18.0	16.0	5.1	8.6	49.0	40.8
93	8.6	16.0	8.6	49.0	18.0	5.1	49.0	317.0	317.0	26.0	18.0	126.0	22.0	317.0	16.0	317.0	22.0	26.0	22.0	126.0	91.3
94	49.0	317.0	317.0	106.0	126.0	49.0	126.0	5.1	317.0	106.0	126.0	26.0	5.1	16.0	49.0	16.0	106.0	49.0	22.0	5.1	96.9
95	16.0	22.0	317.0	22.0	16.0	5.1	317.0	49.0	16.0	126.0	26.0	8.6	5.1	18.0	106.0	26.0	8.6	317.0	317.0	5.1	87.2
96	16.0	5.1	26.0	126.0	18.0	126.0	126.0	317.0	49.0	8.6	317.0	106.0	18.0	49.0	16.0	22.0	317.0	26.0	5.1	16.0	85.5
97	22.0	126.0	8.6	126.0	22.0	126.0	317.0	16.0	317.0	126.0	22.0	126.0	317.0	16.0	8.6	22.0	8.6	18.0	16.0	126.0	94.3
98	8.6	22.0	26.0	317.0	18.0	49.0	5.1	16.0	317.0	126.0	26.0	126.0	5.1	8.6	49.0	18.0	5.1	18.0	49.0	126.0	66.8
99	106.0	26.0	106.0	126.0	317.0	26.0	16.0	22.0	18.0	49.0	18.0	49.0	49.0	16.0	49.0	49.0	126.0	317.0	16.0	5.1	75.3
100	106.0	49.0	49.0	5.1	5.1	317.0	5.1	8.6	16.0	49.0	16.0	49.0	317.0	26.0	26.0	26.0	126.0	18.0	16.0	49.0	63.9
101	106.0	8.6	317.0	126.0	5.1	317.0	16.0	317.0	5.1	106.0	16.0	317.0	8.6	5.1	49.0	5.1	26.0	8.6	16.0	22.0	89.9
102	106.0	126.0	8.6	49.0	126.0	8.6	49.0	126.0	8.6	49.0	22.0	317.0	126.0	26.0	126.0	126.0	22.0	26.0	18.0	317.0	89.1
103	18.0	317.0	126.0	106.0	317.0	18.0	22.0	16.0	106.0	18.0	126.0	5.1	16.0	26.0	16.0	126.0	16.0	22.0	5.1	16.0	71.9
104	26.0	49.0	26.0	5.1	18.0	18.0	5.1	18.0	8.6	16.0	26.0	16.0	22.0	126.0	49.0	49.0	49.0	49.0	22.0	317.0	45.7
105	317.0	16.0	106.0	317.0	8.6	106.0	18.0	106.0	8.6	22.0	126.0	8.6	22.0	8.6	18.0	8.6	22.0	5.1	5.1	16.0	63.3
106	106.0	126.0	126.0	106.0	22.0	26.0	16.0	18.0	22.0	26.0	22.0	18.0	26.0	18.0	22.0	16.0	22.0	49.0	16.0	41.0	
107	126.0	5.1	16.0	317.0	22.0	106.0	22.0	106.0	22.0	5.1	22.0	18.0	16.0	5.1	22.0	22.0	126.0	16.0	26.0	106.0	56.3
108	22.0	126.0	5.1	126.0	26.0	126.0	126.0	22.0	49.0	49.0	49.0	106.0	26.0	5.1	106.0	22.0	26.0	126.0	16.0	317.0	73.8

Eastern Lagoon Sludge - Data

Exposure Event	Exposure Concentrations																				Average
	106.0	317.0	106.0	49.0	317.0	49.0	18.0	26.0	5.1	26.0	49.0	126.0	106.0	5.1	26.0	8.6	22.0	16.0	16.0	5.1	
109	106.0	317.0	106.0	49.0	317.0	49.0	18.0	26.0	5.1	26.0	49.0	126.0	106.0	5.1	26.0	8.6	22.0	16.0	16.0	5.1	69.9
110	16.0	49.0	22.0	22.0	18.0	22.0	26.0	49.0	5.1	106.0	8.6	18.0	16.0	5.1	8.6	49.0	8.6	5.1	16.0	18.0	24.4
111	18.0	26.0	16.0	49.0	22.0	5.1	16.0	8.6	49.0	16.0	126.0	317.0	106.0	22.0	126.0	18.0	106.0	49.0	22.0	16.0	56.7
112	26.0	18.0	16.0	49.0	8.6	5.1	26.0	8.6	49.0	26.0	126.0	18.0	49.0	317.0	8.6	18.0	126.0	317.0	49.0	317.0	78.9
113	106.0	317.0	8.6	126.0	16.0	106.0	5.1	49.0	126.0	5.1	8.6	317.0	18.0	106.0	26.0	5.1	126.0	16.0	22.0	8.6	75.9
114	8.6	18.0	26.0	49.0	26.0	317.0	106.0	317.0	16.0	5.1	18.0	8.6	126.0	18.0	8.6	26.0	317.0	26.0	5.1	8.6	72.5
115	16.0	18.0	106.0	26.0	18.0	26.0	126.0	317.0	22.0	16.0	26.0	317.0	106.0	26.0	49.0	26.0	5.1	106.0	49.0	49.0	72.5
116	126.0	26.0	26.0	106.0	126.0	106.0	16.0	126.0	22.0	317.0	16.0	126.0	106.0	8.6	26.0	16.0	26.0	317.0	317.0	317.0	113.6
117	126.0	317.0	16.0	26.0	16.0	106.0	49.0	5.1	26.0	18.0	18.0	8.6	8.6	8.6	126.0	18.0	26.0	26.0	5.1	8.6	47.9
118	5.1	126.0	317.0	26.0	18.0	49.0	106.0	8.6	16.0	317.0	317.0	5.1	16.0	16.0	18.0	49.0	22.0	18.0	126.0	26.0	80.1
119	16.0	49.0	106.0	16.0	317.0	18.0	317.0	16.0	126.0	126.0	22.0	18.0	106.0	5.1	317.0	126.0	49.0	317.0	16.0	49.0	106.6
120	18.0	16.0	8.6	317.0	8.6	49.0	18.0	126.0	8.6	22.0	22.0	18.0	106.0	16.0	49.0	49.0	8.6	317.0	26.0	26.0	61.5
121	5.1	106.0	317.0	49.0	49.0	106.0	126.0	16.0	8.6	49.0	18.0	26.0	16.0	18.0	8.6	317.0	317.0	26.0	49.0	18.0	82.3
122	16.0	317.0	49.0	16.0	126.0	106.0	22.0	5.1	22.0	16.0	5.1	18.0	106.0	26.0	18.0	106.0	5.1	106.0	126.0	8.6	61.0
123	49.0	106.0	8.6	126.0	16.0	22.0	49.0	22.0	18.0	126.0	16.0	5.1	22.0	18.0	26.0	49.0	317.0	22.0	18.0	126.0	58.1
124	106.0	5.1	22.0	5.1	317.0	26.0	22.0	18.0	8.6	106.0	16.0	26.0	8.6	126.0	5.1	16.0	26.0	16.0	106.0	8.6	49.5
125	106.0	317.0	106.0	26.0	26.0	317.0	317.0	106.0	26.0	106.0	16.0	49.0	49.0	8.6	126.0	8.6	26.0	18.0	106.0	317.0	108.9
126	317.0	22.0	49.0	16.0	5.1	16.0	18.0	126.0	126.0	26.0	49.0	16.0	126.0	26.0	49.0	5.1	22.0	16.0	8.6	126.0	58.2
127	317.0	8.6	26.0	16.0	106.0	126.0	126.0	317.0	106.0	126.0	317.0	49.0	18.0	16.0	26.0	26.0	8.6	317.0	22.0	104.1	
128	26.0	106.0	49.0	106.0	126.0	8.6	8.6	18.0	18.0	5.1	16.0	49.0	26.0	317.0	5.1	18.0	5.1	22.0	49.0	22.0	50.0
129	5.1	8.6	317.0	18.0	5.1	126.0	26.0	5.1	106.0	22.0	126.0	5.1	126.0	5.1	26.0	18.0	26.0	26.0	8.6	22.0	51.4
130	106.0	22.0	16.0	16.0	106.0	126.0	49.0	5.1	8.6	49.0	317.0	8.6	22.0	26.0	49.0	22.0	126.0	26.0	16.0	22.0	56.9
131	49.0	49.0	16.0	317.0	18.0	126.0	18.0	18.0	8.6	16.0	49.0	5.1	16.0	317.0	26.0	317.0	49.0	22.0	106.0	26.0	78.4
132	317.0	5.1	126.0	16.0	126.0	16.0	126.0	317.0	106.0	49.0	5.1	8.6	18.0	317.0	106.0	106.0	8.6	18.0	106.0	126.0	101.2
133	8.6	16.0	16.0	49.0	49.0	317.0	18.0	16.0	49.0	22.0	49.0	317.0	126.0	26.0	22.0	22.0	16.0	18.0	8.6	49.0	60.7
134	49.0	5.1	49.0	18.0	8.6	18.0	106.0	49.0	18.0	26.0	49.0	22.0	106.0	18.0	317.0	5.1	8.6	16.0	106.0	22.0	50.8
135	5.1	26.0	106.0	8.6	317.0	5.1	26.0	5.1	126.0	18.0	317.0	26.0	317.0	8.6	8.6	49.0	26.0	317.0	49.0	49.0	90.5
136	106.0	5.1	22.0	16.0	18.0	8.6	16.0	106.0	26.0	22.0	126.0	8.6	22.0	106.0	49.0	8.6	5.1	22.0	8.6	22.0	36.2
137	126.0	106.0	317.0	49.0	106.0	26.0	5.1	22.0	317.0	126.0	106.0	22.0	49.0	18.0	26.0	126.0	5.1	317.0	22.0	126.0	100.9
138	317.0	8.6	317.0	18.0	26.0	8.6	49.0	18.0	18.0	49.0	49.0	5.1	5.1	126.0	317.0	18.0	22.0	8.6	49.0	26.0	72.8
139	5.1	16.0	16.0	106.0	22.0	106.0	16.0	8.6	16.0	26.0	26.0	49.0	5.1	26.0	126.0	126.0	106.0	5.1	106.0	22.0	46.7
140	8.6	317.0	106.0	22.0	106.0	22.0	8.6	126.0	126.0	126.0	49.0	317.0	106.0	317.0	16.0	18.0	8.6	18.0	26.0	106.0	97.5
141	8.6	317.0	106.0	22.0	106.0	22.0	8.6	126.0	126.0	126.0	49.0	317.0	106.0	317.0	16.0	18.0	8.6	18.0	26.0	106.0	97.5
142	26.0	126.0	26.0	26.0	8.6	5.1	5.1	5.1	5.1	8.6	26.0	8.6	317.0	16.0	49.0	49.0	317.0	26.0	49.0	55.8	
143	317.0	106.0	22.0	49.0	16.0	106.0	18.0	16.0	126.0	16.0	16.0	5.1	18.0	18.0	8.6	16.0	26.0	18.0	49.0	126.0	54.6
144	5.1	18.0	5.1	22.0	22.0	18.0	8.6	49.0	26.0	8.6	106.0	18.0	26.0	8.6	126.0	26.0	26.0	16.0	18.0	126.0	34.0

Eastern Lagoon Sludge - Data

Exposure Event	Exposure Concentrations																					Average
	145	22.0	49.0	22.0	16.0	8.6	16.0	5.1	26.0	106.0	317.0	26.0	5.1	18.0	22.0	126.0	26.0	16.0	16.0	106.0	49.0	
146	16.0	8.6	126.0	317.0	126.0	26.0	26.0	8.6	16.0	317.0	8.6	5.1	26.0	106.0	18.0	5.1	317.0	49.0	49.0	317.0	94.4	
147	8.6	126.0	126.0	126.0	317.0	49.0	22.0	26.0	18.0	16.0	5.1	22.0	317.0	18.0	49.0	22.0	8.6	106.0	126.0	8.6	75.8	
148	16.0	22.0	317.0	126.0	106.0	49.0	16.0	22.0	26.0	8.6	5.1	49.0	126.0	26.0	49.0	106.0	8.6	22.0	18.0	18.0	56.8	
149	22.0	126.0	16.0	8.6	106.0	106.0	5.1	49.0	317.0	106.0	106.0	22.0	8.6	22.0	126.0	22.0	5.1	18.0	16.0	8.6	60.8	
150	26.0	5.1	16.0	5.1	126.0	8.6	16.0	126.0	49.0	317.0	18.0	22.0	106.0	8.6	18.0	106.0	18.0	22.0	5.1	18.0	51.8	
151	26.0	126.0	16.0	18.0	49.0	5.1	22.0	126.0	49.0	26.0	26.0	16.0	106.0	18.0	317.0	5.1	5.1	5.1	106.0	317.0	69.2	
152	18.0	26.0	49.0	26.0	8.6	126.0	16.0	106.0	126.0	106.0	5.1	16.0	49.0	49.0	26.0	18.0	16.0	317.0	5.1	106.0	60.7	
153	5.1	8.6	8.6	106.0	26.0	126.0	126.0	16.0	5.1	22.0	26.0	49.0	49.0	18.0	18.0	18.0	16.0	49.0	126.0	16.0	41.7	
154	106.0	26.0	106.0	317.0	22.0	18.0	8.6	5.1	106.0	8.6	16.0	126.0	5.1	18.0	22.0	106.0	126.0	16.0	16.0	126.0	65.0	
155	49.0	49.0	126.0	26.0	317.0	26.0	26.0	106.0	8.6	8.6	16.0	16.0	8.6	317.0	26.0	8.6	8.6	106.0	18.0	126.0	69.7	
156	317.0	26.0	317.0	8.6	106.0	317.0	106.0	8.6	18.0	126.0	106.0	26.0	22.0	106.0	5.1	26.0	18.0	106.0	18.0	18.0	90.1	
157	16.0	18.0	106.0	317.0	16.0	49.0	317.0	126.0	26.0	22.0	5.1	106.0	317.0	22.0	5.1	8.6	8.6	8.6	22.0	18.0	76.7	
158	8.6	126.0	18.0	126.0	317.0	126.0	22.0	16.0	106.0	126.0	16.0	18.0	16.0	126.0	126.0	8.6	49.0	26.0	8.6	49.0	71.7	
159	106.0	49.0	49.0	5.1	49.0	317.0	8.6	49.0	126.0	8.6	5.1	8.6	5.1	22.0	5.1	126.0	8.6	317.0	8.6	5.1	63.9	
160	5.1	18.0	106.0	126.0	49.0	22.0	5.1	126.0	106.0	8.6	317.0	26.0	18.0	16.0	16.0	317.0	106.0	126.0	106.0	5.1	81.2	
161	106.0	26.0	5.1	49.0	106.0	126.0	49.0	18.0	8.6	22.0	8.6	106.0	126.0	5.1	106.0	16.0	16.0	18.0	106.0	106.0	56.5	
162	8.6	16.0	126.0	126.0	22.0	26.0	5.1	18.0	106.0	8.6	16.0	106.0	126.0	106.0	317.0	18.0	26.0	106.0	8.6	22.0	65.7	
163	8.6	49.0	8.6	5.1	317.0	49.0	49.0	26.0	126.0	106.0	126.0	22.0	8.6	26.0	106.0	5.1	106.0	18.0	106.0	22.0	64.5	
164	16.0	317.0	16.0	49.0	16.0	22.0	26.0	106.0	5.1	8.6	26.0	106.0	26.0	317.0	126.0	106.0	8.6	16.0	5.1	18.0	66.8	
165	106.0	106.0	49.0	16.0	317.0	18.0	22.0	8.6	22.0	26.0	106.0	106.0	49.0	5.1	126.0	18.0	8.6	8.6	8.6	8.6	56.8	
166	26.0	22.0	22.0	26.0	317.0	8.6	126.0	317.0	49.0	18.0	26.0	49.0	317.0	16.0	49.0	26.0	16.0	16.0	126.0	317.0	94.5	
167	16.0	18.0	49.0	126.0	26.0	8.6	18.0	317.0	5.1	49.0	317.0	16.0	26.0	106.0	126.0	8.6	106.0	22.0	49.0	18.0	71.4	
168	5.1	16.0	18.0	22.0	16.0	22.0	8.6	106.0	22.0	106.0	317.0	8.6	8.6	22.0	16.0	16.0	126.0	49.0	49.0	106.0	53.0	
169	18.0	18.0	18.0	16.0	16.0	16.0	18.0	22.0	317.0	16.0	18.0	26.0	126.0	8.6	317.0	8.6	16.0	8.6	49.0	18.0	53.5	
170	16.0	49.0	18.0	16.0	16.0	26.0	317.0	16.0	22.0	26.0	126.0	16.0	22.0	18.0	5.1	26.0	22.0	8.6	22.0	5.1	39.6	
171	8.6	5.1	8.6	5.1	22.0	16.0	126.0	126.0	16.0	49.0	18.0	26.0	16.0	5.1	317.0	8.6	317.0	317.0	16.0	49.0	73.6	
172	126.0	8.6	5.1	317.0	5.1	18.0	22.0	106.0	106.0	16.0	22.0	317.0	317.0	317.0	106.0	22.0	16.0	18.0	8.6	99.0		
173	49.0	317.0	5.1	106.0	106.0	106.0	16.0	26.0	16.0	106.0	8.6	49.0	22.0	106.0	106.0	5.1	8.6	8.6	49.0	66.1		
174	126.0	49.0	22.0	5.1	5.1	22.0	26.0	22.0	18.0	8.6	126.0	22.0	49.0	26.0	26.0	8.6	49.0	16.0	8.6	18.0	32.7	
175	16.0	16.0	26.0	5.1	317.0	49.0	317.0	317.0	126.0	26.0	16.0	5.1	126.0	8.6	16.0	8.6	18.0	26.0	16.0	26.0	74.1	
176	5.1	317.0	18.0	317.0	22.0	126.0	8.6	22.0	126.0	5.1	126.0	8.6	16.0	49.0	22.0	106.0	106.0	16.0	106.0	317.0	92.0	
177	8.6	317.0	8.6	126.0	8.6	317.0	5.1	49.0	5.1	49.0	5.1	16.0	22.0	5.1	22.0	5.1	5.1	317.0	26.0	8.6	66.3	
178	317.0	49.0	8.6	317.0	22.0	16.0	317.0	317.0	5.1	18.0	5.1	49.0	22.0	26.0	22.0	126.0	22.0	16.0	22.0	18.0	85.7	
179	126.0	16.0	126.0	49.0	8.6	8.6	5.1	18.0	16.0	16.0	126.0	106.0	16.0	22.0	126.0	22.0	26.0	18.0	16.0	44.5		
180	22.0	126.0	16.0	106.0	126.0	126.0	18.0	106.0	317.0	18.0	5.1	106.0	49.0	18.0	18.0	8.6	22.0	106.0	8.6	317.0	82.0	

Eastern Lagoon Sludge - Data

Exposure Event	Exposure Concentrations																					Average
	106.0	18.0	49.0	126.0	317.0	16.0	22.0	106.0	49.0	26.0	106.0	18.0	8.6	16.0	8.6	26.0	26.0	18.0	317.0	74.3		
181	106.0	18.0	49.0	126.0	317.0	16.0	22.0	106.0	49.0	26.0	106.0	18.0	8.6	16.0	8.6	26.0	26.0	18.0	317.0	74.3		
182	106.0	16.0	8.6	18.0	22.0	26.0	8.6	18.0	22.0	26.0	5.1	106.0	106.0	106.0	49.0	106.0	22.0	5.1	22.0	49.0	42.4	
183	18.0	106.0	22.0	317.0	26.0	106.0	26.0	18.0	317.0	126.0	5.1	5.1	16.0	26.0	126.0	5.1	26.0	126.0	8.6	16.0	72.1	
184	126.0	18.0	18.0	8.6	18.0	126.0	18.0	22.0	26.0	26.0	49.0	16.0	49.0	26.0	317.0	106.0	5.1	49.0	22.0	22.0	53.4	
185	317.0	16.0	16.0	16.0	106.0	49.0	18.0	49.0	22.0	126.0	22.0	317.0	22.0	317.0	5.1	5.1	8.6	126.0	317.0	126.0	100.0	
186	106.0	126.0	317.0	22.0	126.0	106.0	106.0	317.0	126.0	8.6	49.0	126.0	18.0	16.0	106.0	317.0	126.0	22.0	5.1	16.0	108.1	
187	49.0	22.0	26.0	106.0	106.0	18.0	8.6	106.0	16.0	317.0	5.1	126.0	16.0	106.0	8.6	317.0	5.1	26.0	126.0	80.8		
188	106.0	317.0	26.0	16.0	8.6	317.0	18.0	106.0	8.6	18.0	106.0	317.0	8.6	49.0	317.0	49.0	5.1	49.0	106.0	49.0	99.8	
189	126.0	106.0	22.0	5.1	18.0	106.0	16.0	8.6	5.1	126.0	26.0	8.6	16.0	106.0	22.0	106.0	18.0	126.0	126.0	8.6	55.1	
190	49.0	49.0	22.0	5.1	22.0	8.6	49.0	126.0	126.0	5.1	126.0	106.0	317.0	49.0	16.0	49.0	49.0	126.0	126.0	22.0	72.4	
191	49.0	22.0	317.0	5.1	49.0	8.6	26.0	5.1	16.0	106.0	5.1	16.0	126.0	49.0	106.0	5.1	126.0	106.0	106.0	106.0	67.8	
192	5.1	22.0	18.0	49.0	8.6	5.1	16.0	16.0	8.6	18.0	16.0	16.0	49.0	5.1	8.6	22.0	126.0	106.0	18.0	18.0	27.6	
193	18.0	126.0	5.1	5.1	5.1	22.0	22.0	18.0	26.0	8.6	18.0	22.0	49.0	26.0	16.0	18.0	126.0	126.0	317.0	8.6	49.1	
194	16.0	106.0	106.0	317.0	22.0	8.6	8.6	106.0	49.0	18.0	49.0	26.0	16.0	26.0	18.0	26.0	106.0	126.0	18.0	126.0	64.7	
195	16.0	22.0	16.0	5.1	5.1	22.0	26.0	106.0	49.0	317.0	18.0	8.6	5.1	5.1	106.0	106.0	49.0	22.0	49.0	22.0	48.8	
196	49.0	49.0	317.0	106.0	317.0	317.0	8.6	49.0	22.0	126.0	106.0	8.6	16.0	317.0	106.0	8.6	106.0	49.0	8.6	49.0	106.8	
197	22.0	49.0	5.1	16.0	49.0	317.0	26.0	26.0	49.0	22.0	22.0	8.6	18.0	26.0	5.1	5.1	16.0	18.0	16.0	126.0	42.1	
198	106.0	126.0	26.0	317.0	26.0	106.0	5.1	126.0	18.0	106.0	8.6	8.6	126.0	16.0	5.1	22.0	18.0	18.0	49.0	317.0	77.5	
199	106.0	126.0	18.0	49.0	8.6	126.0	49.0	16.0	22.0	5.1	8.6	126.0	18.0	22.0	22.0	18.0	106.0	126.0	8.6	8.6	49.5	
200	49.0	16.0	126.0	106.0	106.0	26.0	106.0	49.0	22.0	8.6	22.0	317.0	126.0	8.6	106.0	126.0	26.0	8.6	22.0	16.0	69.6	
201	317	16.0	49.0	16.0	5.1	317.0	18.0	8.6	22.0	22.0	106.0	49.0	317.0	26.0	22.0	106.0	317.0	16.0	317.0	16.0	104.1	
202	18.0	22.0	106.0	16.0	8.6	126.0	8.6	5.1	18.0	26.0	317.0	49.0	18.0	106.0	22.0	5.1	16.0	16.0	16.0	5.1	46.2	
203	26.0	26.0	106.0	16.0	126.0	317.0	16.0	49.0	317.0	126.0	49.0	22.0	126.0	317.0	16.0	16.0	317.0	317.0	126.0	5.1	121.8	
204	106.0	5.1	126.0	22.0	126.0	8.6	126.0	106.0	106.0	22.0	22.0	16.0	16.0	5.1	26.0	126.0	49.0	106.0	317.0	126.0	78.1	
205	126.0	16.0	16.0	18.0	126.0	317.0	106.0	126.0	126.0	16.0	16.0	26.0	22.0	126.0	26.0	18.0	18.0	106.0	49.0	317.0	85.9	
206	18.0	22.0	49.0	8.6	5.1	22.0	16.0	22.0	8.6	18.0	22.0	8.6	8.6	26.0	106.0	8.6	26.0	5.1	317.0	26.0	37.2	
207	126.0	5.1	5.1	106.0	8.6	5.1	26.0	8.6	5.1	26.0	8.6	49.0	49.0	18.0	106.0	5.1	106.0	26.0	49.0	37.2		
208	18.0	106.0	317.0	16.0	22.0	8.6	26.0	49.0	49.0	26.0	106.0	8.6	106.0	49.0	18.0	8.6	126.0	5.1	106.0	16.0	59.3	
209	18.0	26.0	317.0	26.0	317.0	106.0	16.0	317.0	5.1	26.0	49.0	126.0	22.0	18.0	126.0	49.0	16.0	22.0	22.0	5.1	81.5	
210	8.6	26.0	22.0	106.0	49.0	5.1	16.0	8.6	106.0	49.0	26.0	8.6	49.0	5.1	22.0	18.0	26.0	18.0	106.0	34.0		
211	317.0	5.1	16.0	49.0	18.0	8.6	106.0	5.1	317.0	18.0	126.0	106.0	16.0	8.6	49.0	16.0	317.0	317.0	26.0	26.0	93.4	
212	22.0	49.0	26.0	18.0	49.0	26.0	26.0	106.0	317.0	106.0	126.0	16.0	22.0	5.1	8.6	22.0	18.0	16.0	5.1	22.0	50.3	
213	8.6	18.0	49.0	16.0	8.6	317.0	26.0	18.0	18.0	22.0	126.0	26.0	26.0	26.0	126.0	49.0	49.0	16.0	26.0	317.0	64.4	
214	126.0	22.0	317.0	26.0	8.6	26.0	8.6	5.1	317.0	106.0	49.0	49.0	26.0	5.1	49.0	317.0	5.1	317.0	22.0	5.1	90.3	
215	317.0	18.0	16.0	5.1	317.0	22.0	18.0	317.0	126.0	49.0	18.0	16.0	18.0	18.0	106.0	26.0	26.0	26.0	16.0	79.1		
216	126.0	49.0	126.0	18.0	26.0	22.0	18.0	26.0	49.0	22.0	16.0	106.0	18.0	317.0	49.0	26.0	8.6	26.0	106.0	49.0	60.2	

Eastern Lagoon Sludge - Data

Exposure Event	Exposure Concentrations																				Average
	106.0	26.0	26.0	106.0	317.0	5.1	106.0	16.0	26.0	8.6	26.0	26.0	18.0	317.0	106.0	8.6	5.1	18.0	18.0	18.0	
217	106.0	26.0	26.0	106.0	317.0	5.1	106.0	16.0	26.0	8.6	26.0	26.0	18.0	317.0	106.0	8.6	5.1	18.0	18.0	18.0	65.2
218	16.0	106.0	8.6	16.0	126.0	106.0	106.0	26.0	18.0	106.0	126.0	26.0	5.1	18.0	49.0	16.0	16.0	317.0	26.0	18.0	62.6
219	22.0	317.0	8.6	16.0	16.0	26.0	26.0	5.1	5.1	126.0	126.0	26.0	16.0	5.1	126.0	8.6	26.0	16.0	5.1	106.0	51.4
220	106.0	126.0	49.0	8.6	106.0	26.0	22.0	5.1	106.0	16.0	26.0	317.0	16.0	22.0	26.0	49.0	26.0	8.6	22.0	106.0	59.5
221	16.0	26.0	26.0	49.0	317.0	317.0	317.0	126.0	26.0	5.1	126.0	16.0	8.6	18.0	126.0	22.0	106.0	49.0	106.0	26.0	91.4
222	317.0	22.0	26.0	18.0	49.0	18.0	5.1	49.0	5.1	126.0	16.0	49.0	49.0	317.0	126.0	26.0	49.0	18.0	18.0	18.0	66.1
223	126.0	106.0	16.0	8.6	16.0	8.6	22.0	317.0	126.0	8.6	26.0	317.0	8.6	49.0	26.0	26.0	126.0	26.0	106.0	22.0	74.4
224	18.0	49.0	26.0	16.0	16.0	5.1	317.0	317.0	5.1	49.0	5.1	106.0	126.0	49.0	317.0	5.1	16.0	317.0	126.0	8.6	94.7
225	22.0	26.0	126.0	26.0	22.0	26.0	8.6	18.0	106.0	126.0	26.0	49.0	16.0	49.0	16.0	8.6	317.0	49.0	16.0	8.6	53.1
226	126.0	26.0	8.6	49.0	49.0	5.1	5.1	26.0	8.6	317.0	22.0	26.0	106.0	317.0	126.0	49.0	18.0	126.0	317.0	5.1	86.6
227	8.6	18.0	106.0	126.0	126.0	26.0	26.0	8.6	317.0	317.0	5.1	106.0	106.0	126.0	106.0	317.0	106.0	317.0	106.0	126.0	125.0
228	16.0	18.0	22.0	49.0	49.0	16.0	126.0	18.0	126.0	106.0	26.0	106.0	49.0	16.0	8.6	8.6	106.0	16.0	317.0	49.0	62.4
229	16.0	5.1	126.0	18.0	106.0	5.1	8.6	5.1	16.0	26.0	106.0	5.1	317.0	8.6	26.0	22.0	49.0	22.0	106.0	106.0	55.0
230	106.0	16.0	8.6	18.0	49.0	317.0	317.0	18.0	8.6	49.0	126.0	49.0	106.0	8.6	5.1	8.6	18.0	16.0	8.6	16.0	63.5
231	26.0	18.0	49.0	8.6	5.1	18.0	26.0	18.0	49.0	16.0	8.6	22.0	5.1	18.0	126.0	26.0	18.0	49.0	18.0	26.0	27.5
232	106.0	126.0	126.0	5.1	317.0	22.0	22.0	106.0	8.6	16.0	126.0	18.0	126.0	26.0	26.0	16.0	8.6	106.0	26.0	5.1	66.9
233	49.0	16.0	317.0	49.0	317.0	317.0	106.0	106.0	8.6	26.0	106.0	49.0	5.1	317.0	18.0	16.0	26.0	8.6	49.0	106.0	100.6
234	8.6	106.0	126.0	49.0	26.0	317.0	22.0	22.0	22.0	126.0	106.0	49.0	22.0	106.0	106.0	5.1	126.0	317.0	49.0	106.0	90.8
235	126.0	16.0	5.1	18.0	5.1	5.1	26.0	16.0	317.0	26.0	106.0	106.0	18.0	49.0	16.0	317.0	106.0	8.6	126.0	126.0	76.9
236	8.6	126.0	5.1	22.0	106.0	22.0	26.0	106.0	126.0	16.0	49.0	18.0	16.0	5.1	317.0	18.0	22.0	8.6	18.0	49.0	54.2
237	8.6	18.0	26.0	49.0	49.0	317.0	26.0	5.1	5.1	16.0	22.0	5.1	5.1	18.0	5.1	26.0	5.1	317.0	18.0	106.0	52.4
238	49.0	22.0	126.0	18.0	22.0	22.0	8.6	106.0	317.0	18.0	18.0	106.0	8.6	49.0	18.0	5.1	126.0	106.0	18.0	8.6	58.6
239	22.0	26.0	18.0	8.6	49.0	16.0	26.0	126.0	49.0	22.0	8.6	49.0	8.6	5.1	16.0	18.0	8.6	317.0	16.0	26.0	41.8
240	5.1	126.0	49.0	126.0	126.0	317.0	106.0	126.0	106.0	106.0	5.1	8.6	18.0	317.0	26.0	317.0	16.0	106.0	8.6	5.1	101.0
241	18.0	16.0	22.0	22.0	16.0	26.0	5.1	16.0	106.0	22.0	18.0	317.0	317.0	26.0	8.6	16.0	8.6	22.0	49.0	49.0	55.0
242	5.1	106.0	106.0	26.0	8.6	317.0	16.0	106.0	126.0	49.0	18.0	317.0	16.0	106.0	16.0	8.6	126.0	5.1	49.0	49.0	78.8
243	106.0	18.0	16.0	5.1	106.0	16.0	18.0	126.0	106.0	49.0	106.0	26.0	317.0	22.0	106.0	18.0	5.1	106.0	8.6	8.6	64.5
244	49.0	317.0	26.0	8.6	106.0	5.1	49.0	317.0	126.0	317.0	126.0	18.0	49.0	317.0	317.0	26.0	126.0	18.0	126.0	126.0	128.5
245	126.0	22.0	26.0	106.0	5.1	18.0	18.0	5.1	5.1	16.0	22.0	317.0	16.0	106.0	106.0	18.0	49.0	16.0	8.6	16.0	51.1
246	22.0	5.1	5.1	317.0	106.0	16.0	317.0	16.0	18.0	18.0	5.1	317.0	49.0	317.0	49.0	49.0	106.0	126.0	18.0	18.0	94.7
247	18.0	18.0	106.0	26.0	22.0	126.0	18.0	106.0	16.0	49.0	49.0	26.0	5.1	22.0	106.0	317.0	126.0	49.0	5.1	18.0	61.4
248	49.0	26.0	106.0	49.0	126.0	5.1	8.6	49.0	16.0	317.0	5.1	126.0	5.1	22.0	49.0	126.0	5.1	26.0	8.6	126.0	62.5
249	22.0	16.0	8.6	317.0	106.0	22.0	16.0	317.0	5.1	49.0	22.0	5.1	26.0	22.0	18.0	22.0	18.0	18.0	317.0	26.0	68.6
250	126.0	106.0	49.0	22.0	16.0	18.0	18.0	5.1	49.0	18.0	49.0	126.0	26.0	22.0	317.0	26.0	317.0	16.0	18.0	18.0	68.1

Eastern Lagoon Sludge - Statistics

	100 Events	150 Events	200 Events	250 Events
Avg -	71.0	69.9	69.4	69.7
sd -	20.6	20.8	20.4	20.9

Event	Averages			
	100 Events	150 Events	200 Events	250 Events
1	27.0	24.4	24.4	24.4
2	32.0	27.0	27.0	27.0
3	39.0	32.0	27.6	27.5
4	39.1	34.0	32.0	27.6
5	39.6	36.2	32.7	32.0
6	40.8	39.0	34.0	32.7
7	40.8	39.1	36.2	34.0
8	41.2	39.6	39.0	34.0
9	41.3	40.8	39.1	36.2
10	43.0	40.8	39.6	37.2
11	44.0	41.0	39.6	37.2
12	44.2	41.2	40.8	39.0
13	45.4	41.3	40.8	39.1
14	46.1	43.0	41.0	39.6
15	46.6	44.0	41.2	39.6
16	47.7	44.2	41.3	40.8
17	47.9	45.4	41.7	40.8
18	49.7	45.7	42.1	41.0
19	50.5	46.1	42.4	41.2
20	50.8	46.6	43.0	41.3
21	50.9	46.7	44.0	41.7
22	51.0	47.7	44.2	41.8
23	51.5	47.9	44.5	42.1
24	51.6	47.9	45.4	42.4
25	53.4	48.1	45.7	43.0
26	53.9	49.5	46.1	44.0
27	54.7	49.7	46.6	44.2
28	55.9	49.9	46.7	44.5
29	57.5	50.0	47.7	45.4
30	58.7	50.5	47.9	45.7
31	59.1	50.8	47.9	46.1
32	60.5	50.8	48.1	46.2
33	61.0	50.9	48.8	46.6
34	62.0	51.0	49.1	46.7
35	62.6	51.4	49.5	47.7
36	63.3	51.5	49.5	47.9
37	63.7	51.6	49.7	47.9
38	63.9	51.8	49.9	48.1
39	64.5	53.4	50.0	48.8
40	64.5	53.9	50.5	49.1

Event	Averages			
	100 Events	150 Events	200 Events	250 Events
41	64.6	54.6	50.8	49.5
42	65.0	54.7	50.8	49.5
43	66.2	55.8	50.9	49.7
44	66.8	55.9	51.0	49.9
45	66.8	56.3	51.4	50.0
46	66.9	56.7	51.5	50.3
47	67.4	56.8	51.6	50.5
48	68.5	56.9	51.8	50.8
49	69.4	57.5	53.0	50.8
50	69.7	58.1	53.4	50.9
51	71.7	58.2	53.4	51.0
52	71.9	58.7	53.5	51.1
53	73.3	59.1	53.9	51.4
54	73.3	60.5	54.6	51.4
55	73.6	60.7	54.7	51.5
56	75.3	60.8	55.1	51.6
57	76.4	61.0	55.8	51.8
58	76.7	61.0	55.9	52.4
59	77.8	61.5	56.3	53.0
60	77.9	62.0	56.5	53.1
61	78.8	62.6	56.7	53.4
62	79.6	63.3	56.8	53.4
63	80.4	63.3	56.8	53.5
64	81.9	63.7	56.9	53.9
65	82.0	63.9	57.5	54.2
66	82.1	64.5	58.1	54.6
67	82.7	64.5	58.2	54.7
68	83.5	64.6	58.7	55.0
69	83.7	65.0	59.1	55.0
70	84.0	66.2	60.5	55.1
71	85.1	66.8	60.7	55.8
72	85.2	66.8	60.7	55.9
73	85.5	66.9	60.8	56.3
74	85.5	67.4	61.0	56.5
75	85.8	68.5	61.0	56.7
76	85.8	69.4	61.5	56.8
77	86.0	69.7	62.0	56.8
78	86.3	69.9	62.6	56.9
79	86.9	71.7	63.3	57.5
80	87.2	71.9	63.3	58.1

Eastern Lagoon Sludge - Statistics

Event	Averages				Event	Averages			
	100 Events	150 Events	200 Events	250 Events		100 Events	150 Events	200 Events	250 Events
81	89.2	71.9	63.7	58.2	128		93.0	76.4	67.8
82	89.2	72.5	63.9	58.6	129		94.0	76.7	68.1
83	89.5	72.5	63.9	58.7	130		94.2	76.7	68.5
84	90.4	72.8	64.5	59.1	131		94.3	77.5	68.6
85	91.3	73.3	64.5	59.3	132		94.4	77.8	69.2
86	93.0	73.3	64.5	59.5	133		95.1	77.9	69.4
87	94.0	73.6	64.6	60.2	134		96.5	78.4	69.6
88	94.2	73.8	64.7	60.5	135		96.9	78.8	69.7
89	94.3	75.3	65.0	60.7	136		97.5	78.9	69.7
90	95.1	75.8	65.0	60.7	137		97.6	79.6	69.9
91	96.5	75.9	65.7	60.8	138		100.9	80.1	71.4
92	96.9	76.4	66.1	61.0	139		101.2	80.4	71.7
93	97.6	76.7	66.2	61.0	140		101.4	80.8	71.7
94	101.4	77.8	66.3	61.4	141		101.7	81.2	71.9
95	101.7	77.9	66.8	61.5	142		102.1	81.9	71.9
96	102.1	78.4	66.8	62.0	143		102.6	82.0	72.1
97	102.6	78.8	66.8	62.4	144		104.1	82.0	72.4
98	108.6	78.9	66.9	62.5	145		106.6	82.1	72.5
99	112.8	79.6	67.4	62.6	146		108.6	82.3	72.5
100	138.8	80.1	67.8	62.6	147		108.9	82.7	72.8
101		80.4	68.5	63.3	148		112.8	83.5	73.3
102		81.9	69.2	63.3	149		113.6	83.7	73.3
103		82.0	69.4	63.5	150		138.8	84.0	73.6
104		82.1	69.6	63.7	151			85.1	73.6
105		82.3	69.7	63.9	152			85.2	73.8
106		82.7	69.7	63.9	153			85.5	74.1
107		83.5	69.9	64.4	154			85.5	74.3
108		83.7	71.4	64.5	155			85.7	74.4
109		84.0	71.7	64.5	156			85.8	75.3
110		85.1	71.7	64.5	157			85.8	75.8
111		85.2	71.9	64.5	158			86.0	75.9
112		85.5	71.9	64.6	159			86.3	76.4
113		85.5	72.1	64.7	160			86.9	76.7
114		85.8	72.4	65.0	161			87.2	76.7
115		85.8	72.5	65.0	162			89.1	76.9
116		86.0	72.5	65.2	163			89.2	77.5
117		86.3	72.8	65.7	164			89.2	77.8
118		86.9	73.3	66.1	165			89.5	77.9
119		87.2	73.3	66.1	166			89.9	78.1
120		89.1	73.6	66.2	167			90.1	78.4
121		89.2	73.6	66.3	168			90.4	78.8
122		89.2	73.8	66.8	169			90.5	78.8
123		89.5	74.1	66.8	170			91.3	78.9
124		89.9	74.3	66.8	171			92.0	79.1
125		90.4	75.3	66.9	172			93.0	79.6
126		90.5	75.8	66.9	173			94.0	80.1
127		91.3	75.9	67.4	174			94.2	80.4

Eastern Lagoon Sludge - Statistics

Event	Averages			
	100 Events	150 Events	200 Events	250 Events
175			94.3	80.8
176			94.4	81.2
177			94.5	81.5
178			95.1	81.9
179			96.5	82.0
180			96.9	82.0
181			97.5	82.1
182			97.6	82.3
183			99.0	82.7
184			99.8	83.5
185			100.0	83.7
186			100.9	84.0
187			101.2	85.1
188			101.4	85.2
189			101.7	85.5
190			102.1	85.5
191			102.6	85.7
192			104.1	85.8
193			106.6	85.8
194			106.8	85.9
195			108.1	86.0
196			108.6	86.3
197			108.9	86.6
198			112.8	86.9
199			113.6	87.2
200		138.8	89.1	
201			89.2	
202			89.2	
203			89.5	
204			89.9	
205			90.1	
206			90.3	
207			90.4	
208			90.5	
209			90.8	
210			91.3	
211			91.4	
212			92.0	
213			93.0	
214			93.4	
215			94.0	
216			94.2	
217			94.3	
218			94.4	
219			94.5	
220			94.7	
221			94.7	

Event	Averages			
	100 Events	150 Events	200 Events	250 Events
222				95.1
223				96.5
224				96.9
225				97.5
226				97.6
227				99.0
228				99.8
229				100.0
230				100.6
231				100.9
232				101.0
233				101.2
234				101.4
235				101.7
236				102.1
237				102.6
238				104.1
239				104.1
240				106.6
241				106.8
242				108.1
243				108.6
244				108.9
245				112.8
246				113.6
247				121.8
248				125.0
249				128.5
250				138.8